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COCCIDIOIDAL GRANULOMA (COCCIDIOIDOMYCOSIS)

ITS INCIDENCE IN MAN AND ANIMALS AND ITS DIAGNOSIS IN ANIMALS

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The increasing importance of coccidioidal infection is apparent to workers in medical science, judging from available literature on the subject. Since the first discovery of human coccidioidal granuloma in South America by Wernicke (1892),[1] and in California by Rixford (1894)[2] and Giltner's[3] discovery of the disease in California cattle, the general conception of the malady has changed materially.

Our purpose in this paper is to correlate available data on the nature, incidence and geographic distribution of coccidioidal granuloma, designated "coccidioidomycosis" by Dickson,[4] in both man and animals. A conception of the human phase of the disease is quite incomplete without coordinating the physician's researches on human beings with the veterinarian's investigations on lower animals. To the physician, veterinarian or other scientist interested in coccidioidal infection a wealth of literature is available. A monograph was prepared for the California State Board of Health[2] in which are cited one hundred and seventy-two references.

THE DISEASE IN MAN

A highly fatal disease in man known as coccidioidal granuloma was recognized for many years in central California, while in the same locality a nonfatal influenza-like disease existed also and was known locally as "valley fever," "desert fever," "desert rheumatism," or "San Joaquin Valley fever." The relationship of these two diseases was not recognized until 1936, when the work of Dickson and Gifford[5] showed that the two maladies were caused by the same organism, Coccidioides immitis.

The discussion of coccidioidal infection in man should be considered from two points of view: first, the primary, acute, uncomplicated type with low mortality, known as "valley fever," and, second, the more commonly known, highly fatal chronic form, coccidioidal granuloma.

VALLEY FEVER

In its initial stage "valley fever" resembles influenza and is followed in a few days by the eruptive phase of erythema nodosum in about 5 per cent of the cases, and less frequently by erythema multiforme. The cutaneous lesions are often associated with arthritis, sore throat and conjunctivitis. The disease may be confused with pneumonia, tuberculosis, pleurisy, smallpox, measles, tularemia, syphilis and typhoid and rarely with poliomyelitis. All ages of both sexes are susceptible; fortunately, however, the mortality is negligible.

Smith[6] reports that thousands of migratory workers in California have acquired coccidioides infection during recent years, according to clinical observations, laboratory examinations and coccidioidin skin tests. Newcomers appear more susceptible to the benign infection than do native or old time residents, who may have acquired a degree of immunity to the disease through previous coccidioidal infection. Smith also states that an investigation was made of 432 patients with "San Joaquin fever" in Kern and Tulare countries during the seventeen months beginning December 1937. All recovered without sequelae.

COCCIDIOIDAL GRANULOMA

As commonly known, coccidioidal granuloma in human beings is a chronic, progressive, highly fatal fungous disease affecting the lungs, skin, lymph nodes, bones, meninges, thoracic viscera and other body tissues. Kessel[7] says that 70 per cent of the cases occurring in the Los Angeles County Hospital indicate that the initial lesion is in the lung. In contrast to the wide distribution of the lesions observed in man, the infection in cattle has thus far been confined to the thoracic lymph nodes and the lungs. Coccidioidomycosis in man is a close mimicry of tuberculosis and frequently may be mistaken for that disease; however, the exclusion of acid-fast organisms and the recovery of the fungus from the sputum or body tissues should verify the diagnosis. Microscopic examination often discloses otherwise unsuspected cases. Dickson says that frequently the diagnosis is tuberculosis clinically, but on gross examination of sectioned tissues the true diagnosis is found to be coccidioidal granuloma.

From the Branch Pathological Laboratory, Bureau of Animal Industry U. S. Department of Agriculture.

1. Wernicke, Robert: Ueber Enen Protozoenbefund Bei Mycosis Fungoides, (?) Centralbl. f. Bakt. **12:** 859-861, 1892.
2. Rixford, Emmet: Early History of Coccidioidal Granuloma in California, Spec. Bull. 57, issued by the California Dept. Pub. Health, June 1931, pp. 5-8.
3. Giltner, L. T.: Occurrence of Coccidioidal Granuloma (Oidiomycosis) in Cattle, J. Agric. Research **14:** 533-541 (Sept. 16) 1918.
4. Dickson, E. C.: Coccidioides Infection: Part I, Arch. Int. Med. **59:** 1029-1044 (June) 1937.
5. Dickson, E. C.: Primary Coccidioidomycosis: The Initial Acute Infection Which Results in Coccidioidal Granuloma, Am. Rev. Tuberc. **38:** 722-729 (Dec.) 1938. Dickson, E. C., and Gifford, M. A.: Coccidioides Infection (Coccidioidomycosis): II. The Primary Type of Infection), Arch. Int. Med. **62:** 853-871 (Nov.) 1938. Dickson, E. C.: Coccidioidomycosis: The Preliminary Acute Infection with Fungus Coccidioides, J. A. M. A. **111:** 1362-1365 (Oct. 8) 1938.
6. Smith, C. E.: Epidemiology of Acute Coccidioidomycosis with Erythema Nodosum ("San Joaquin" or "Valley Fever"), Am. J. Pub. Health **30:** 600-611 (June) 1940.
7. Kessel, J. F.: Recent Observations on Coccidioides Infection, Am. J. Trop. Med. **21:** 447 (May) 1941.

Involvement of the joints in both benign and chronic types of coccidioidomycosis is reported by Rosenberg and his co-workers [8] at the Mayo Clinic. While the joint involvement in their cases of mild involvement usually subsided, in the serious phase of the disease the affected joints often resulted in generalized fatal infection.

MODE OF TRANSMISSION

There is at present no evidence that man to man, animal to man or animal to animal infection occurs under natural conditions, yet the disease may be readily transmitted experimentally from infected tissues to laboratory animals. The danger arising from handling diseased tissues or coccidioides cultures should be recognized.

Pulmonary infection may be acquired by inhalation of the vegetative phase of dust laden chlamydospores.

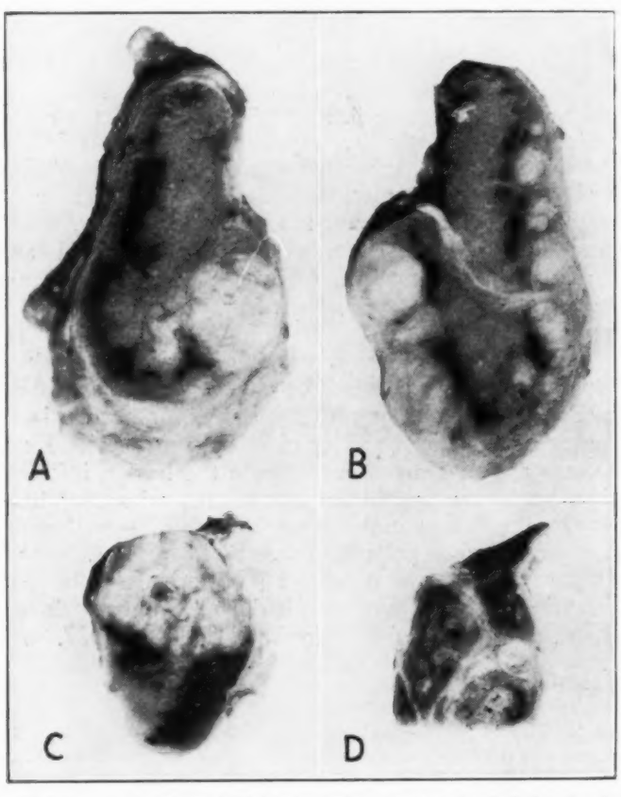

Fig. 1.—*A*, *B*, *C*, involved lymph nodes showing the variation in size and location of the granulomatous areas. Note the distinct encapsulated foci in *B*; also the striking resemblance to tuberculosis lesions. *D*, granulomatous areas in the lung containing a number of encapsulated foci. Somewhat reduced from photographs with a magnification of 1½ diameters.

This mode of infection was verified accidentally by a laboratory technician who inhaled sporulating cultures. The vegetative form of the fungus is believed to exist more frequently during rainy periods in arid regions where the winters are relatively warm and the summers are hot, dry and dusty. By special mediums and laboratory technic, Stewart and Meyer [9] recovered the coccidioides spores from the soil on a California ranch on which human infections had been diagnosed. Reporting an epidemic of coccidioidal infection among a party of students and faculty members of Stanford University, Davis and his associates [10] comment regarding the likely source of infection through inhaling spore-laden dust during the collection of specimens in the icinity of a rattle snake hole. Later examination of the soil from the same area revealed the presence of Coccidioides immitis. Abrasion of the skin may be a route of infection, and in rare instances the disease may be acquired by the gastrointestinal tract.

GEOGRAPHIC DISTRIBUTION

In 1931 Beck [11] reported 286 human cases of chronic coccidioidal granuloma. Of these, 254 occurred in California and 16 in other states—Arizona, Colorado, Illinois, Kansas, Missouri, Nebraska, New Mexico, Pennsylvania, South Carolina, Texas and Washington; 14 cases occurred in South America and 2 in Italy. Other localities reported by Miller [12] in 1936 are Alaska, Tennessee, Louisiana and Hawaii. Evans and Ball [13] report 1 human case in Old Mexico.

Kessel [7] says:

> Between the years of 1893 and 1939, 660 cases of coccidioides have been reported to the California State Department of Public Health. The actual geographical origin of the infections is not known in all cases but the majority of the reported cases originate in the southern portion of the San Joaquin Valley. Of 100 cases of coccidioidal granuloma observed in the Los Angeles County Hospital in recent years, 51 probably originated in the San Joaquin Valley, 31 in southern California and 8 in Arizona, New Mexico or Texas. Dr. J. D. Aronson of the U. S. Office of Indian Affairs recently tested 140 Indian children on the Pima Reservation near Phoenix, Ariz., with coccidioidin from our laboratory and reports that 90 per cent of them developed a positive reaction.

A new area of primary coccidioidal infection in the vicinity of Camp Roberts, California, is reported by Shelton,[14] who found 14 infected soldiers from among 736 recruits recently stationed at that camp. These infected men gave a negative reaction to the coccidioidin skin test on arrival. However, after three months' stay, their reaction to the test became positive.

In Texas, Smith [15] reports a case of coccidioidal infection occurring in a man living in the vicinity of El Paso who had never been in California. From Texas, also, Caldwell [16] reports 3 proved cases from the Dallas area and 3 more human infections since the publication of his article. At San Angelo, Texas, Schulze [17] reports that 18 per cent of 100 private patients reacted to the coccidioidin skin test. All these reactors were ranchmen none of whom had ever visited the San Joaquin Valley. Three cases of the acute "valley fever" type infection and 9 cases of the granulomatous disease arising in western Texas are mentioned by Schulze as having been reported by other observers.

In the vicinity of Phoenix, Ariz., Phillips [18] states that he found 10 per cent of the older residents of the

8. Rosenberg, E. F.; Dockerly, M. B., and Meyerding, H. W.: Coccidioidal Arthritis: Report of Case in Which Ankles Were Involved; Condition Unaffected by Sulfanilamide and Roentgen Therapy, Proc. Staff Meet., Mayo Clin. **17:** 161-166 (March 18) 1942.

9. Stewart, R. A., and Meyer, K. F.: Isolation of Coccidioides Immitis (Stiles) from the Soil, Proc. Soc. Exper. Biol. & Med. **29:** 937 (May) 1932.

10. Davis, Burt L., Jr.; Smith, Ruth Tangier, and Smith, C. E.: An Epidemic of Coccidioidal Infection (Coccidioidomycosis), J. A. M. A. **118:** 1182-1186 (April 4) 1942.

11. Beck, M. D.; Traum, J., and Harrington, E. S.: Coccidioidal Granuloma, J. Am. Vet. M. A. **78:** 490-499 (April) 1931.

12. Miller, H. E.: Coccidioidal Granuloma, weekly bulletin, California State Dept. Pub. Health, Jan. 11, 1936.

13. Evans, Newton, and Ball, H. A.: Coccidioidal Granuloma: Analysis of Fifty Cases, J. A. M. A. **93:** 1881-1885 (Dec. 14) 1929.

14. Shelton, R. M.: A Survey of Coccidioidomycosis at Camp Roberts, California, J. A. M. A. **118:** 1186-1190 (April 4) 1942.

15. Smith, L. M.: Coccidioidal Granuloma: Report of a Case Originating in Western Texas, Arch. Dermat. & Syph. **28:** 175-181 (Aug.) 1933.

16. Caldwell, G. T.: Coccidioidal Granuloma: A Report of Three Cases Recognized in Texas, Texas J. Med. **28:** 327-333 (Sept.) 1932. Coccidioidal Granuloma, personal communication to the authors. Report of 3 additional unpublished cases.

17. Schulze, V. E.: Personal communication to the authors from San Angelo, Texas, March 1942.

18. Phillips, E. W.: Presence of Coccidioidal Infection in Phoenix, Southwestern Med. **23:** 48-51 (Feb.) 1939.

Salt River Valley gave positive coccidioidin reactions. Many of these persons were from rural areas in contact with livestock, but, curiously enough, the largest incidence of positive reactors were found not among cattlemen but among men who handled sheep.

Mills and Farness [19] cite the case of a 15 year old boy attending a private school near Tucson, Ariz., who showed cavitation of the lungs on roentgen examination. The continued absence of acid-fast organisms, high eosinophilia and general absence of fever prompted the more thorough examination of the sputum, which resulted in recovery of a fungus recognized as Coccidioides immitis. The finding of this positive case stimulated these physicians and a dozen or more clinical diagnoses came to their attention. Intradermic coccidioidin tests on 60 Arizona patients in the Pima County Hospital showed that 20 per cent gave a positive reaction. Similar results were obtained in other groups of patients. Farness [20] cites 5 human cases apparently arising in Arizona.

The latest published articles and personal communications (1942) indicate that at least 790 cases of chronic coccidioidal granuloma have been recognized in human beings. Of this number, Wynns,[21] who is epidemiologist of the California State Board of Health, reports a mortality of nearly 40 per cent in 744 California cases of this highly fatal chronic form of the disease. His report includes Beck's 254 cases.

The senior author (G. W. S.) has observed but 1 human case of coccidioidomycosis at the Colorado General Hospital, reported by O'Toole [22] and originating from California. Physicians concerned with the treatment of this disease may find valuable suggestions in our bibliography.[23]

The data herein cited indicate not only that the disease in man is recognized in California but that it is becoming an important public health problem in many other localities.

THE DISEASE IN ANIMALS

While the greatest interest in coccidioidal infections has centered in human medicine, the veterinary phase of the problem has its place in relation to public health and animal welfare. Cummins and his associates [24] make a direct plea to the veterinarian, the physician, the internist, the surgeon and the pathologist for a closer cooperation and a more thorough investigation of this important disease in its relation to man and the lower animals.

Pulford and Larson [25] state that the ever widening distribution of coccidioidal granuloma forces one to the conclusion that the disease is either spreading or is becoming better recognized by the medical profession and that it should no longer be called the "California disease." Smith [26] believes that the discovery of coccidioidal granuloma in cattle should be of great value in locating new foci of infection.

A variety of animals may be sources of coccidioides infection. Emmons [27] of the U. S. Public Health Service recovered the fungus in 25 of 105 trapped rodents representing six species in the vicinity of San Carlos, Ariz. Spores of the fungus were also found in the soil of this locality, possibly arising from animal contamination.

From Tucson, Ariz., Farness [28] reports a case of coccidioidal infection occurring in a great Dane dog. Later in a personal communication he cites 5 additional canine cases diagnosed either by cultural methods or by human coccidioidin applied as a cutaneous test. Farness also has 2 cats under observation in which he suspects coccidioidomycosis.

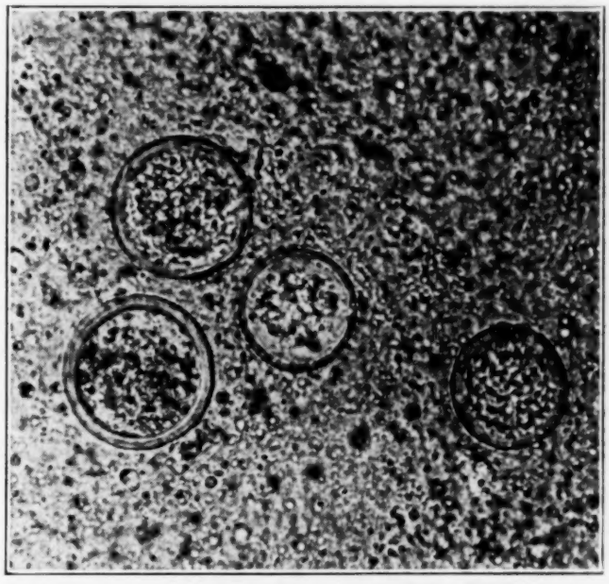

Fig. 2.—Press preparation of the purulent contents of a lymph node lesion illustrating spherules with distinct double contour capsule; × 600.

Another canine case occurring in a 2 year old male English setter is reported in Canada by Plummer [29] and Radmore.[30] The dog in question was raised in Canada and was mated with a female setter from California. In sections, coccidioidal spherules were demonstrated in large numbers in the lung and brain tissues. Although the lungs grossly resembled tuberculosis, evidence of acid-fast organisms was not demonstrated.

While engaged in the diagnosis and treatment of human coccidioidal infections in Arizona, Phillips [31] called attention to a condition in sheep resembling coccidioidal granuloma.

In a band of 56 sheep kept for three years near Phoenix, 30 head gave positive reactions with 0.1 cc.

19. Mills, C. W., and Farness, O. J.: Coccidioides Immitis Infection in Southern Arizona, Tr. Am. Climat. & Clin. A. (1940) **56:** 147-153, 1941.

20. Farness, O. J.: Coccidioidomycosis, J. A. M. A. **116:** 1749-1752 (April 19) 1941.

21. Wynns, H. L.: Coccidioidal Granuloma, personal communication to the authors.

22. O'Toole, Elizabeth: Coccidioidal Granuloma, with Some Notes on Coccidioidin and Coccidioides Vaccine, presented at the Colorado-Wyoming Academy of Science Meeting, Golden, Colo., Nov. 7, 1941.

23. Coccidioidal Granuloma, Queries and Minor Notes, J. A. M. A. **111:** 558 (Aug. 6) 1938. Etter, L. E., and Schumacher, F. L.: Pulmonary Actinomycosis: Recovery After Thymol Therapy, ibid. **113:** 1023-1024 (Sept. 9) 1939. Sox, H. C., and Dickson, E. C.: Experimental Therapy in Coccidioidal Granuloma, ibid. **106:** 777-779 (March 7) 1936. Tomlinson, C. C., and Bancroft, Paul: Granuloma Coccidioides: Report of a Case Responding Favorably to Antimony and Potassium Tartrate, ibid. **91:** 947-951 (Sept. 29) 1928.

24. Cummins, W. T.; Smith, J. K., and Halliday, C. H.: Coccidioidal Granuloma: An Epidemiologic Survey with a Report of Twenty-Four Additional Cases, J. A. M. A. **93:** 1046-1049 (Oct. 5) 1929.

25. Pulford, D. S., and Larson, E. E.: Coccidioidal Granuloma: Report of a Case Treated by Intravenous Dye, Colloidal Lead and Colloidal Copper, with Autopsy Observations, J. A. M. A. **93:** 1049-1056 (Oct. 5) 1929.

26. Smith, C. E.: Personal communication to the authors, from the department of public health, Stanford University School of Medicine, San Francisco, Feb. 20, 1942.

27. Emmons, C. W.: Isolation of Coccidioides from Soil and Rodents, Pub. Health Rep. **57:** 109-111 (Jan. 23) 1942.

28. Farness, O. J.: Coccidioidal Infection in a Dog, J. Am. Vet. M. A. **97:** 263-264 (Sept.) 1940.

29. Plummer, P. J. G.: Coccidioidomycosis with a Pathological Report of a Case in a Dog, Canad. J. Comp. Med. & Vet. Sc. **5:** 146-148 (May) 1941.

30. Radmore, R. C. S.: An Unusual Condition Found in a Dog, Canad. J. Compt. Med. & Vet. Sc. **5:** 149 (May) 1941.

31. Phillips, E. W.: Personal communication to the authors, Feb. 20, 1942.

of human coccidioidin administered under aseptic conditions. After this several sheep became ill with temperatures of 105 F. or higher, and in 2 abscesses developed in the axillary lymph nodes. Aspirated pus from the softened lymph nodes was cultured, resulting in the recovery of a fungus-like organism which on inoculation killed male guinea pigs with septicemia. The tentative conclusion was that a variant of Coccidioides immitis was present in the Phoenix district, that it affects sheep in particular and that it produces a nonfatal, usually undiagnosed illness in human subjects. He further states that open ulcers persisted for one year on three of the sheep mentioned. These sheep were destroyed without further laboratory examination.

Beck in 1929 reported a single positive case of coccidioidal granuloma in sheep.

COCCIDIOIDAL GRANULOMA IN CATTLE

During the past ten years 78 positive cases of coccidioidal infection in bovines were diagnosed in the laboratory of the Denver Bureau of Animal Industry which originated from localities as follows: California 62, Arizona and Texas 5 each, Old Mexico 4, Colorado [32] and New Mexico [33] 1 case each. These definitely diagnosed cases represent many additional cases in lots sent for slaughter when only representative samples from a lot were sent to the laboratory for examination. For example, in one lot 6 specimens were submitted with the statement that 45 steers were similarly affected. In another instance a single specimen was submitted with the notation that 36 steers from the San Joaquin Valley showed similar lesions.

With few exceptions these tissues were from cattle slaughtered at federally inspected abattoirs.[34] Their origin and probable source of infection were traced through shipping records in practically all instances. This group consisted of 32 male animals, 33 females and 13 in which the sex was not given.

Two 8 to 10 month old calves were the youngest animals noted that showed coccidioidal infection.[35]

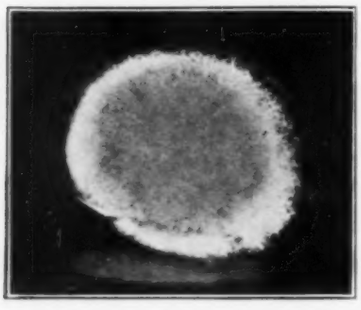

Fig. 3.—Single colony of Coccidioides immitis, showing a cotton-like growth on solid medium; × 2.

Thirty-nine cattle were from 10 months to 3 years old, 17 were past 4 years and the ages of the remaining 22 were unknown. The lesions were distributed as follows: bronchial lymph node only in 21 animals; mediastinal lymph node only in 21 animals; bronchial and mediastinal lymph nodes in 13 animals; pulmonary lesions with lymph node involvement [36] in 8 animals and in 15 animals the location of the lesions was unidentified.

32. Stiles, G. W., Jr.; Shahan, M. S., and Davis, C. L.: Coccidioidal Granuloma in Cattle in Colorado, J. Am. Vet. M. A. **82**: 928-930 (June) 1933.

33. Stiles, G. W., Jr., and Davis, C. L.: Case of Bovine Coccidioidal Granuloma from the Southwest, J. Am. Vet. M. A. **87**: 582-585 (Nov.) 1935.

34. Three positive specimens were submitted by the California State Department of Agriculture.

35. Davis, C. L.; Stiles, G. W., and McGregor, A. N.: Coccidioidal Granuloma in Calves, J. Am. Vet. M. A. **92**: 562-563 (April) 1938.

36. Davis, C. L.; Stiles, G. W., and McGregor, A. N.: Pulmonary Coccidioidal Granuloma: A New Site of Infection in Cattle, J. Am. Vet. M. A. **91**: 209-215 (Aug.) 1937.

CATTLE CASES REPORTED BY OTHERS

In 1918 Giltner reported the first cases of coccidioidal granuloma in bronchial and mediastinal lymph nodes from cattle slaughtered at San Diego, Calif. From these tissues Coccidioides immitis was recovered on

Fig. 4.—Hanging drop preparation of the mold, showing intricate network of mycelia; × 200.

culture, and pathogenicity was determined by successful experimental injections into guinea pigs, rabbits, dogs, cattle, sheep and swine.

During 1931 Beck reported 10 cases of coccidioides infection occurring in cattle in addition to 9 other bovine cases previously reported. During the period from Dec. 17, 1938 to Feb. 6, 1939, Bengston,[37] in charge of the bureau's pathologic laboratory at Chicago, diagnosed 20 cases of coccidioidal granuloma from California and Texas cattle aged from 1 year upward. Steers, cows and bulls were affected. In 16 cases the mediastinal lymph nodes only were involved; in 3 cases the bronchial lymph nodes and in 1 case the bronchial lymph nodes and lungs were infected.

From the bureau's laboratory in Washington, D. C., Schoening [38] reports several positive cases of coccidioidal granuloma during recent years. A summary of the data now at hand shows a total of 116 definitely diagnosed cases of bovine coccidioidal granuloma in the United States. However, it is probable that many more cases in cattle have escaped identification or were not submitted for laboratory confirmation.

LABORATORY MANIFESTATIONS OF BOVINE LESIONS

In the study of the diseased tissues as they occur in the bovine, it is possible to observe different stages of development of the lesions. Cattle affected with coccidioidal granuloma show no clinical symptoms and, as has been previously mentioned, the lesions thus far observed have been confined to the thoracic lympl. nodes

37. Bengston, J. S.: Coccidioidal Granuloma (in Food-Producing Animals), The Bureau Veterinarian, **15**: 1-4 (May) 1939.

38. Schoening, H. C.: Personal communication to the authors, Feb. 21, 1942.

and the lungs and are detected only when the animals come to slaughter. In the purulent stage of the affected lymph nodes all or part of the tissues may be involved. In this stage the node is enlarged and on incision is found to contain a pale, yellowish, tenacious pus, granular in consistency and resembling somewhat actinomycotic material. It is not uncommon to find the tissue traversed by many trabeculous striations imparting a honeycomb appearance to the wall of the abscess with the formation of pus pockets.

The purulent stage is followed by granulomatous changes in which the contents have a cheesy consistency resembling somewhat the caseous lesion of tuberculosis (fig. 1). In this stage the lesion is walled off from the uninvolved lymphoid tissue by a connective tissue capsule and contains several encapsulated foci with purulent centers. Calcareous deposits are found in the older lesions. Grossly, the lesions of coccidioidal granuloma in cattle may be confused with tuberculosis, actinomycosis, actinobacillosis or abscesses due to Corynebacterium pyogenes. Laboratory examination of the suspected material is often necessary to make a correct diagnosis.

The 78 bovine cases reported herein were diagnosed in the Denver laboratory either by the demonstration of spherules in press preparations of the purulent contents, positive cultures of Coccidioides immitis being obtained, or by microscopic sections. In many instances all three methods of diagnosis were employed. Cover slip preparations of the purulent contents of the affected lymph nodes disclose spherical bodies with a refractile, double contoured capsule (fig. 2). The parasites may vary in size from 10 to 50 microns. Occasionally the spherules are seen surrounded by distinct rosettes with clubs radiating out from the capsule, which aids in the differential diagnosis from actinobacillosis and actinomycosis. Cultures from the pus on meat-infusion agar will yield a growth of Coccidioides immitis after incubation for from forty-eight to seventy-two hours at 37 C. The mold on solid mediums produces white, cotton-like colonies (fig. 3). Hanging-drop preparations from the growth show an intricate network of mycelia (fig. 4). In the tissues, however, the organisms appear only in the spherical form.

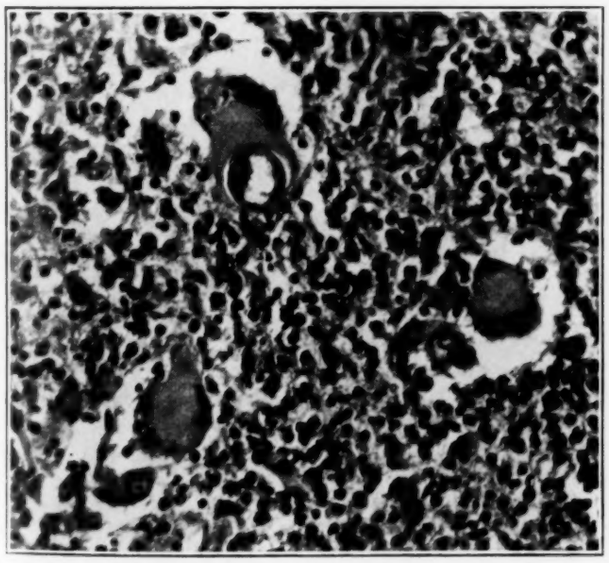

Fig. 5.—Section from a lymph node lesion containing inflammatory cells and several giant cells containing spherules; × 300.

Microscopic study of sections of the lesions stained with hematoxylin-eosin show a granulomatous process consisting of connective tissue, blood vessels, lymphocytes, plasma cells, mononuclear and polymorphonuclear leukocytes, a few eosinophils and giant cells. Scattered throughout the tissue are seen variable numbers of double contoured spherules the majority of which have been taken up by giant cells (fig. 5). Usually a single parasite is seen within a giant cell, but as many as six spherules have been noted within a single giant cell in some sections. Some of the parasites, which are presumably the more recent sporulating forms, often show a strong affinity for eosin. Occasional spherules show ruptured walls, and in some sections one or more parasites may be surrounded by a group of eosin-staining radiating clubs forming a well defined rosette (fig. 6). In some fields the cellular reaction mimics a tubercle, and only the presence of the spherules within the giant cells or in the tissue enables a differentiation from a tuberculous process. In some instances it may be necessary to cut blocks from different portions of the lesion in order to demonstrate the spherules in the tissues.

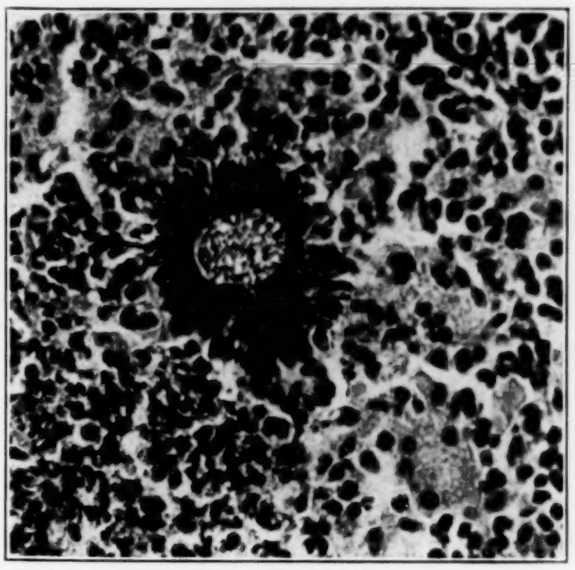

Fig. 6.—Section of a purulent area demonstrating a rosette formation surrounding the parasite; × 500.

SUMMARY

1. Coccidioidal granuloma appears to be acquired by inhaling spores of the fungus, by cutaneous infection through wounds or rarely through the gastrointestinal route.

2. While coccidioidal granuloma has been considered peculiar to California, its appearance both in man and in animals from other localities indicates that the malady is either spreading or has not heretofore been recognized.

3. Coincident with this disease in man, an increase is noted in the number of cases occurring in lower animals. In regions in which man has acquired infection, cattle, dogs, sheep, wild rodents and possibly other animals may harbor the fungus.

U. S. Custom House, Room 517.

PATHOLOGIC LESIONS PRODUCED BY SULFATHIAZOLE

REPORT OF FOUR FATAL CASES

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AND
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BALTIMORE

We are presenting 4 fatal cases of sulfathiazole treatment in which autopsy revealed histopathologic lesions not characteristic of any previously described disease process. Rake, Van Dyke and Corwin [1] described identical pathologic lesions in their experimental work on mice inoculated with sulfathiazole. They stated that 77 per cent of the mice given a 2 per cent sulfathiazole diet died during a four week period and that the lesions were chiefly in the spleen and the genitourinary tract. They reported tuberculous-like lesions in sulfathiazole treated monkeys; they attributed these lesions to tuberculosis. However, in the kidneys from these monkeys they demonstrated crystals surrounded by leukocytic zones.

The microscopic lesions are so similar to the focal necrosis seen in infections that no doubt many cases since the introduction of the drug have been overlooked. To report, we selected 4 cases in which we feel that the lesions were clearcut and could not be confused with lesions produced by septic infection. The histories do not suggest septicemia. Bacterial stains revealed no organisms. All blood cultures were negative.

CASE 1.—*History.*—Mrs. K. B., aged 32, was admitted to the maternity ward of the Union Memorial Hospital April 18, 1941 with hypertension, albuminuria and pitting edema of the lower extremities complicating a full term pregnancy. She had previously had two full term pregnancies, each complicated with toxemia. On admission her blood pressure was 180 systolic and 100 diastolic. The physical examination was otherwise noncontributory. The content of nonprotein nitrogen, cholesterol and total protein in the blood was normal on admission, as was the carbon dioxide combining power. The membranes were ruptured, and a normal delivery followed three hours in labor. Immediately after delivery the blood pressure was 140 systolic and 90 diastolic. The albuminuria and edema promptly disappeared.

The further clinical course is shown in the accompanying table.

On the eighth postpartum day 150 grains (9 Gm.) of sulfathiazole was given because of the presence of a mild infection of the upper respiratory tract.

On the fifteenth postpartum day a diagnosis of probable drug fever was made. Sixth molar sodium lactate solution and other fluids were forced. The carbon dioxide combining power of the blood was raised to 73 volumes per cent as a result of the lactate therapy.

On the eighteenth postpartum day 90 grains (6 Gm.) of sulfathiazole was given (15 grains [1 Gm.] every four hours for six doses) after a chill, a temperature of 105 F., tenderness in the right costovertebral angle and clumps of white blood cells in the urine had been observed. The diagnosis was probable pyelitis.

Clinical Course in Case 1

Postpartum day	8	9	10	11	12	13	14	15	16	17	18	19	20
Temperature, F.	98.6	98.6	100	100	100	100	100	104	101	98.6	Chill 105	105	103
Sulfathiazole, dosage	150 grains	..	..	..	..	..	90 grains	75 grains	..	..	90 grains	..	..
Sulfathiazole, blood level	..	..	..	..	..	..	..	..	..	..	..	10 mg. per 100 cc.	..
Escherichia coli in urine culture	..	..	..	..	..	Positive	..	..	..	..	..	..	..
White blood cell clumps in urine	..	..	..	..	..	..	..	..	..	..	+	..	..
Drug rash	..	..	..	..	..	..	..	..	..	..	..	+	..
Right costovertebral angle, pain and tenderness	..	..	..	..	..	..	..	..	..	..	+	..	..
Respiratory rate	..	..	..	..	..	..	..	..	..	..	..	45	20
Nonprotein nitrogen	..	..	..	..	..	..	..	..	..	..	..	83 mg. per 100 cc.	..
Carbon dioxide	..	..	..	..	..	..	..	..	73 vol. %	..	..	35 vol. %	..
White blood cells	..	..	..	..	..	..	..	..	..	..	..	7,100 per cu. mm.	..
Polymorphonuclear cells	..	..	..	..	..	..	..	..	..	..	..	93%	..
Pulse rate	..	..	..	..	..	..	..	..	..	..	..	..	130
Blood pressure	..	..	..	..	..	..	..	..	..	..	..	130/80	60/40
Coma and death	..	..	..	..	..	..	..	..	..	..	..	..	+
Total proteins	..	..	..	..	..	..	..	..	..	..	..	5.8 mg. per 100 cc.	..
Anterior and posterior repair	..	+	..	..	..	..	..	..	..	..	..	..	..

On the nineteenth postpartum day lactate solution and other fluids were forced to combat uremia and acidosis.

On the twentieth postpartum day, coma, a rise in the pulse rate and a drop in the blood pressure came on suddenly. Death occurred one-half hour after the onset of coma.

The fluid intake averaged 3,500 cc. each day and the urinary output 1,500 cc.

The blood cultures were repeatedly negative. The drug rash consisted of small red nodules on the face, neck, chest and forearms.

Autopsy.—Most of the normal observations are eliminated in this report. Gross Examination: A recent, unhealed abdominal sinus wound was present. There was no jaundice or cutaneous manifestations. All the serous cavities contained straw colored fluid; 1,000 cc. was removed from the peritoneal cavity and each pleural cavity contained about 800 cc. Examination of the visceral cavities was unimportant except to reveal bilateral fibrous pleural adhesions. The lungs were distended, air containing and of normal color except along the posterior borders, where a purplish tinge and a doughy consistency were present. Both lungs were crepitant to palpation. The hilus and the mediastinal nodes were not unduly enlarged. The cut surface of the lungs presented a reddish gray parenchyma speckled with miliary pin head size grayish white necrotic areas.

From the Department of Pathology of the Union Memorial Hospital, Baltimore.
Dr. Arnold R. Rich of the Johns Hopkins Hospital, gave permission for use of the last 2 cases. Dr. Warfield T. Longcope, of the Johns Hopkins Hospital, assisted in the preparation of this paper.

1. Rake, Geoffrey; Van Dyke, H. B., and Corwin, W. C.: Pathologic Changes Following Prolonged Administration of Sulfathiazole and Sulfapyridine, Am. J. M. Sc. **200**: 353 (Sept.) 1940.

These were encountered in all the lobes. Grossly, one was impressed by the sharp demarcation of these grayish areas, which were not surrounded by hemorrhagic zones. The lungs

Fig. 1 (case 1).—Lymph node, showing the thick, edematous capsule infiltrated with leukocytes and the sharply defined area of necrosis and accumulated polymorphonuclear cells; × 100.

Fig. 2 (case 1).—Lymph node, with higher magnification, showing necrosis and polymorphonuclear cells more clearly; × 200.

did not show any excess of edema. They were light in weight for their volume and readily floated in water. The patchy necrosis grossly resembled tuberculosis, but no scars or focal lesions of tuberculosis were encountered anywhere.

The heart was normal except for a moderate increase in the pericardial fluid.

The peritoneal cavity presented many large lymph nodes in the folds of the mesentery and in the omentum. These averaged from 1 to 2 cm. in diameter. They were not only encountered by palpation but could be seen as dome shaped elevations along the mesenteric fold. The cut surface presented necrotic pulp. Many of them had actually undergone softening to form a creamy fluid. There were no adhesions.

The spleen weighed 425 Gm. The consistenc was doughy, and the cut surface presented a gray, mushy parenchyma.

The kidneys weighed 175 Gm. each. They were normal in shape. Multiple petechial hemorrhages were seen through the capsules. The cut surfaces presented a moist parenchyma characterized by hyperemia, together with miliary hemorrhages. A gritty substance was distributed throughout the parenchyma. The concretions were translucent and typical of crystals. The mucosa of the pelves showed no hemorrhage or exudate. The pelvic mucosa contained many crystalline deposits. The bladder showed no evidence of inflammation.

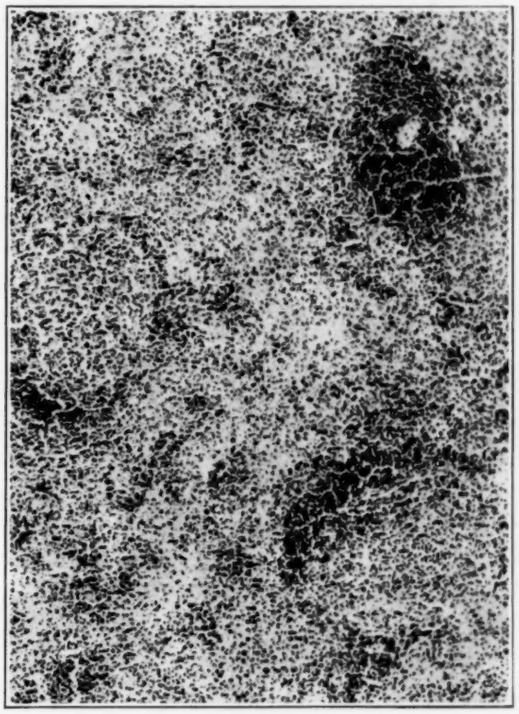

Fig. 3 (case 1).—Spleen, showing areas of focal necrosis destroying the greater part of the malpighian bodies and the reticulum saturated with polymorphonuclear cells; × 100.

The uterus was the size of an orange and typical of the postpartum period. The cavity contained shreds of retained placenta.

Exploration of the skull cavity revealed no gross pathologic changes, and the brain showed nothing abnormal except hyperemia of the meninges.

Microscopic Examination: The lungs showed edema and moderate hyperemia. Throughout all the lobes there were small necrotic areas characterized by accumulations of polymorphonuclear cells. The parenchyma was necrotic in these areas; in fact, many areas showed merely necrosis with relatively few polymorphonuclear cells except along the margin of the necrosis. There was no fibrosis. Bacterial stains revealed no tubercle bacilli or other organisms.

The bone marrow, including that of the ribs and the femurs, was also characterized by distinct areas of necrosis and by massing of leukocytes into nests which either displaced the marrow or necrotized it. In addition to the presence of polymorphonuclear cells, there was definite fragmentation of cells. Large mononuclear cells contained cell particles.

The kidney sections showed areas of necrosis and nests of polymorphonuclear leukocytes apparently more numerous in

the medullary portion of the kidneys than in the cortex. The predominating cells were polymorphonuclear. Some necrotic areas showed erosion of the vessel walls, and in several vessels the necrosis extended through the wall into the lumen, which

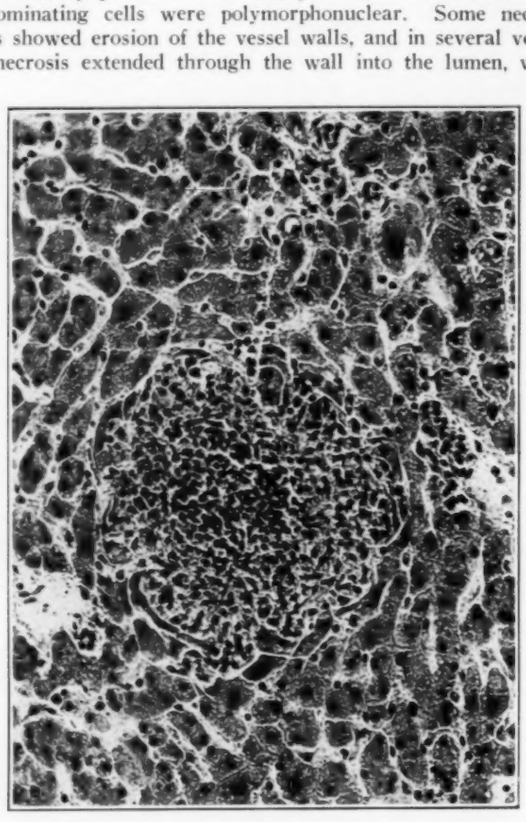

Fig. 4 (case 1).—Liver, showing focal necrosis characterized by accumulation of polymorphonuclear cells; × 200.

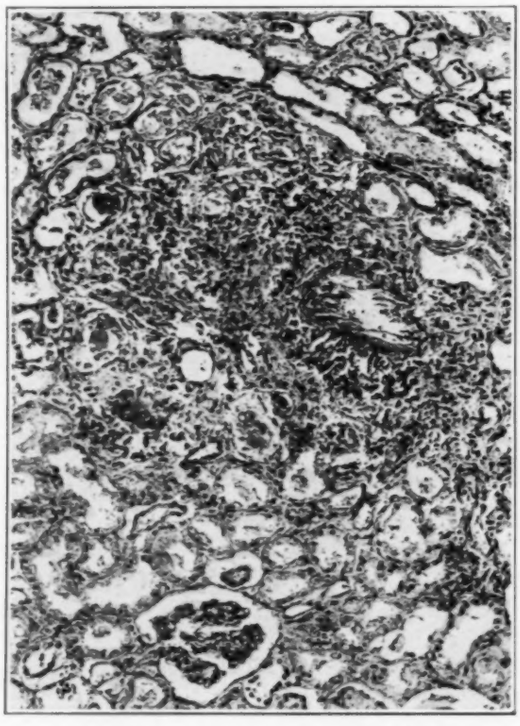

Fig. 5. (case 3).—Kidney, showing sharply defined area characterized by coagulation necrosis and accumulation of polymorphonuclear cells; × 100.

in turn was occluded by a thrombus. Many of the thrombi contained nests of polymorphonuclear cells. The necrotic areas were not confined to any particular structure. They were seen in the glomeruli, in the conducting as well as the convoluted tubules and even in the capsule of the kidney. The greater number of necrotic areas, however, were confined to the medulla.

In the adrenal glands similar areas of necrosis were encountered in the central zones.

In the lymph nodes, two rather distinct types of lesions could be demonstrated. One was characterized by a coagulation necrosis, well defined and not infiltrated with leukocytes. Areas of this type were so numerous that there was coalescence occupying large areas of the lymphoid stroma. Other areas were characterized by displacement of the lymphoid tissue with nests of polymorphonuclear and phagocytic cells.

The spleen showed a process similar to that described for the lymph nodes. The characteristic lesions were encountered chiefly near the malpighian bodies.

The uterus, heart and bladder were essentially normal except for remnants of decidual and placental tissue within the uterine cavity.

The pancreas presented areas of necrosis.

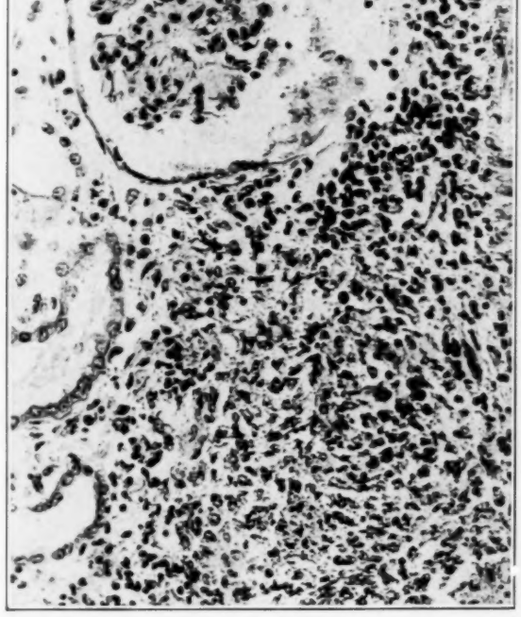

Fig. 6 (case 1).—Kidney, with higher magnification, showing more clearly the destruction of parenchyma and accumulation of polymorphonuclear cells; × 200.

The liver sections showed miliary and distinct areas of focal necrosis, some of which were infiltrated with polymorphonuclear cells.

In the brain, many thrombotic emboli were seen in the vessels. Within some of the thrombi there were necrotic areas. Occasional areas of disintegration and accumulation of phagocytic cells were encountered. These were interpreted as miliary infarctions.

Bacteriologic Examination: Bacterial stains were used, and the sections were studied by Dr. Hugh Spencer, University of Maryland, and Dr. Arnold Rich, the Johns Hopkins Hospital. Their opinions coincided with ours, that the areas of necrosis were of a nonbacterial type.

Anatomic Diagnosis: This was as follows: (1) acute hemorrhagic and diffuse nephritis with precipitation of crystals and areas of miliary focal necrosis; (2) miliary coagulation necrosis of the lungs, lymph nodes (mesenteric), spleen, liver, pancreas, adrenals and bone marrow; (3) generalized cloudy swelling; (4) bilateral pleural effusion; (5) pericardial and peritoneal effusion; (6) recent pelvic laparotomy (sterilization); (7) postpartum condition of the uterus, and (8) cerebral embolism and infarction.

CASE 2.—*History.*—A Negro woman aged 73, admitted to the Provident Hospital April 30, 1941, two days before had had intermittent, excruciating pains in the right upper quadrant. Profuse, constant vomiting occurred on the day previous to admission. Five years before admission the patient had had a renal calculus which she had passed after an attack of severe renal colic.

On admission the temperature was 98 F., the pulse rate 110, the respiratory rate 20 and the blood pressure 160 systolic and 100 diastolic.

Physical examination revealed that the patient was obese and was oriented, coherent and cooperative but acutely ill. There was no jaundice, no cyanosis, no edema and no rash. The bones and joints were normal. Neurologic examination gave negative results. The head, neck, heart and lungs were normal. The abdomen was tender over the gallbladder and over the right costovertebral angle.

There was moderate muscle spasm on deep palpation over the gallbladder.

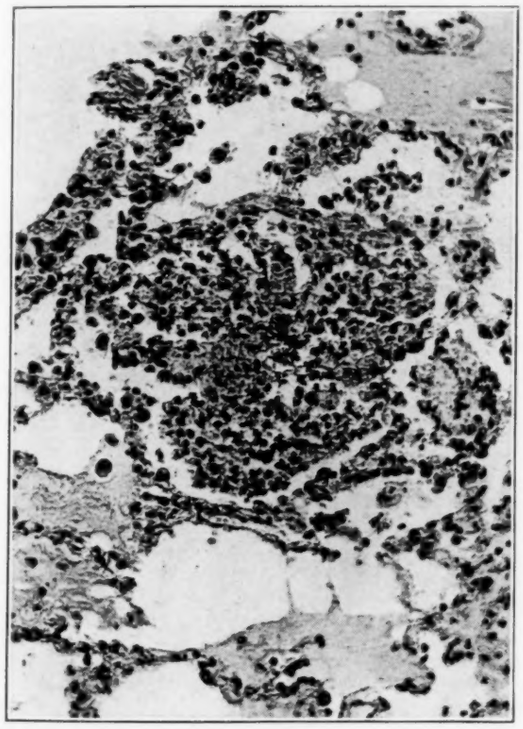

Fig. 7 (case 1).—Lung, showing edema, a distinct area of necrosis and a pool of polymorphonuclear cells; × 200.

Laboratory Examination.—The urine showed a 1 plus reaction for albumin, no sugar, no acetone, no red blood cells and no casts but numerous clumps of white blood cells. A blood count revealed 4,160,000 red cells and 8,900 white cells, with 80 per cent polymorphonuclear leukocytes. The hemoglobin content was 88 per cent and the nonprotein nitrogen content 40 mg. per hundred cubic centimeters. The icteric index was 5, and the phenolsulfonphthalein test revealed a retention of 40 per cent. A urine culture showed Staphylococcus aureus and Esch. coli. Roentgenograms revealed a stag horn calculus in the pelvis of the right kidney.

Course.—The patient was treated with sulfathiazole 645 grains (43 Gm.) from April 2 to 10. The white cell count never exceeded 15,000 with 89 per cent polymorphonuclear leukocytes, and there was no drop in the number of white cells. There was no agranulocytosis and no drop in the hemoglobin content of the blood. The concentration of sulfathiazole in the blood never exceeded 5 mg. per hundred cubic centimeters. On April 8, 9 and 10 the temperature varied between 100 and 10[illegible] F. It then rose to 103 F.; the pulse rate was 130 and the respiratory rate 40. Administration of the drug was stopped. On April 11 and 12 the temperature varied between 104 and 106 F.; the pulse rate was 130 and the respiratory rate 40 to 45. A deep coma gradually developed, followed by death. Further clinical details are not available.

Fig. 8 (case 3).—Lung, showing area similar to that in case 1.

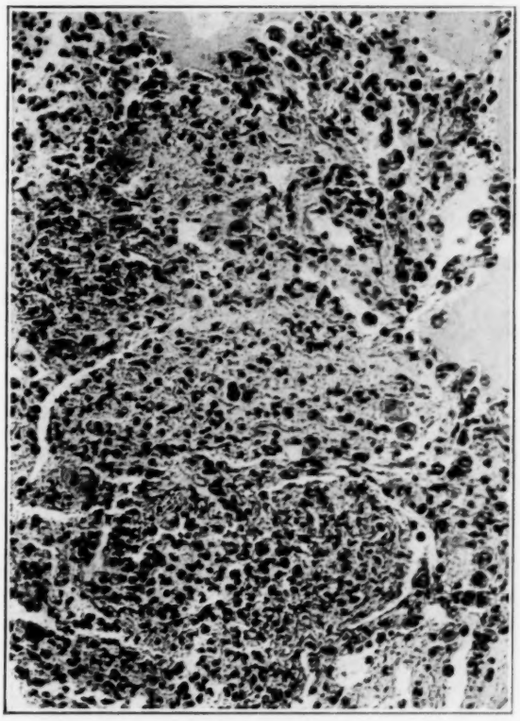

Fig. 9 (case 1).—Lung, showing larger area of necrosis, more advanced, characterized by coagulation and destruction of parenchyma; × 200.

Autopsy.—Gross Examination: External examination was essentially noncontributory. The serous cavities contained a moderate amount of watery fluid. All the viscera presented normal anatomic relations. The right lung adhered to the

thorax by means of dense adhesions. The lungs felt somewhat boggy; they showed many bright red hemorrhagic spots and also numerous small pale areas. Sectioning revealed that the lung was red, with blood tinged fluid flowing from it. There were, however, no areas of frank consolidation.

The heart weighed 410 Gm.; otherwise it was normal.

The spleen was soft and wrinkled. The cut surface presented a mushy pulp.

The liver weighed 1,205 Gm.; the cut surface was a pale reddish brown.

The gallbladder was normal.

The left kidney weighed 110 Gm. A stag horn calculus filled the pelvis. The pelvic mucosa of both kidneys was speckled with small petechial hemorrhages. The kidney parenchyma was swollen and edematous.

Microscopic Examination: There is no need to give a detailed report of the pathologic observations, which except for the stag horn calculus in the left kidney were identical with those in case 1 in that miliary focal necrosis was encountered throughout the entire lung parenchyma, liver, kidneys and spleen. Bone marrow was not available for study.

CASE 3.—*History.*—A Negro man aged 73 was admitted to the Johns Hopkins Hospital July 18, 1941 with a complaint of severe epigastric heaviness, knifelike in character, which followed a heavy meal. There was no nausea or vomiting. There was a history of a 20 pound (9 Kg.) loss of weight in the past six weeks. The patient was definitely jaundiced. There was a tender epigastric mass easily palpable. The blood pressure was 140 systolic and 100 diastolic. Physical examination otherwise gave negative results. A diagnosis of carcinoma of the head of the pancreas was made.

Fig. 10 (case 1).—Rib, showing large areas of coagulation necrosis, with most of the cells in the necrotic area polymorphonuclear; × 200.

Course and Laboratory Study.—Examination of the urine gave negative results. A blood count showed 5,040,000 red cells, and there was 14 Gm. of hemoglobin per hundred cubic centimeters. There were 6,200 white cells, with 58 per cent polymorphonuclear leukocytes. The sedimentation rate, corrected, was 24 mm. an hour; the icteric index was 40, and the albumin-globulin ratio was 1.2. The total protein content was 6.4 mg., the nonprotein nitrogen content 32 mg. and the fasting blood sugar content 100 mg. per hundred cubic centimeters. On the fifth day after admission the patient began to vomit, moist rales were detected in the bases of both lungs and the temperature was elevated. The leukocyte count rose to 17,780. A roentgenogram showed consolidation in the base of the right lung. The patient lived four days after a diagnosis of pneumonia in the base of the right lung had been made. During these four days 720 grains (48 Gm.) of sulfathiazole

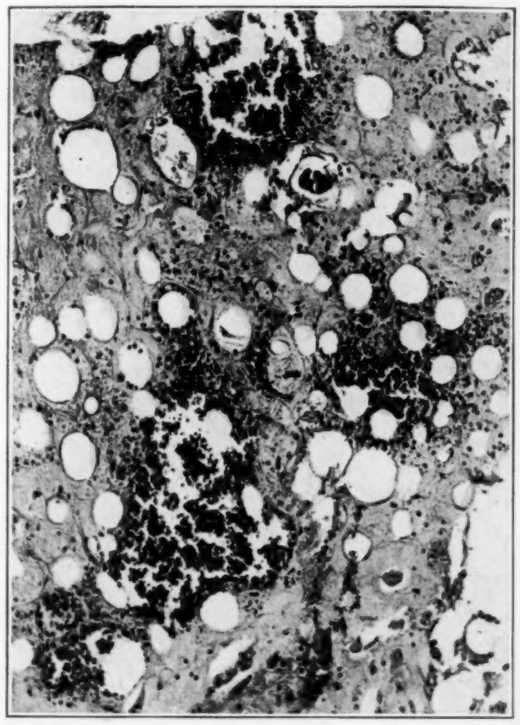

Fig. 11 (case 3).—Bone marrow from femur, showing nests of polymorphonuclear cells and necrosis; × 100.

was given in 5 per cent solution intravenously at the rate of 60 grains (4 Gm.) every eight hours. The temperature ranged from 99 to 101 F., and the highest level of sulfathiazole in the blood was 10.1 mg. per hundred cubic centimeters. The fluid intake was 3,500 cc. a day, and the urinary output averaged 1,575 cc. a day. No further clinical data concerning the patient's last four days were available.

Autopsy (Dr. Arnold Rich).—Anatomic Diagnosis: The provisional anatomic diagnosis was carcinoma of the head of the pancreas and obstruction of the duodenum, common bile duct and pancreatic ducts; metastases to the liver and the mesenteric, aortic and hepatic lymph nodes; jaundice and ascites; hydrothorax on the left; hydropericardium; edema of the extremities; hypertrophy of the stomach wall; severe generalized and moderate coronary arteriosclerosis; emphysema; dense pleural adhesions on the right; a calcified hilar lymph node in the right lung; hydrocele, bilateral; aspiration pneumonia, lower lobe, left lung, and emaciation.

Microscopic Examination: A description of the pathologic lesions would be a repetition of that in case 1. The provisional anatomic diagnosis was not changed, and areas of miliary focal necrosis infiltrated with polymorphonuclear cells were encountered in the kidneys, spleen, liver, bone marrow, lymph nodes and lungs.

CASE 4.—A Negro boy aged 8 months was admitted to the Sydenham Hospital Feb. 26, 1941 with a clinical diagnosis of whooping cough. The temperature was 101 F., the pulse rate 140, the respiratory rate 30 and the weight 10 pounds (4.5 Kg.). The child was emaciated. The skin was dry and wrinkled. The skeletal examination was noncontributory. Crackling rales were heard in the bases of both lungs posteriorly. Roentgen examination confirmed the diagnosis of bronchopneumonia. A blood culture was negative. A blood count showed 60,000 white cells, with 70 per cent small lymphocytes. Beta hemolytic streptococci were obtained from the throat.

Fifteen grains of sulfathiazole was given on admission and then 2 grains (0.1 Gm.) every three hours for thirteen doses. In other words, 40 grains (2.7 Gm.) of sulfathiazole was given by mouth over a period of thirty-six hours. The highest level of sulfathiazole in the blood obtained was 4 mg. per hundred cubic centimeters. The highest temperature reading was 102 F. There was a variation in the results of studies of the blood. The patient died in a paroxysm of coughing.

Autopsy (Dr. Arnold Rich).—Gross Examination: Nothing important was observed except enlarged mediastinal glands, scattered patches of pneumonia and effusion into all the serous cavities.

Microscopic Examination: Areas of miliary focal necrosis infiltrated with polymorphonuclear cells were encountered in the liver, lungs, spleen and kidneys. As in the other 3 cases, there was no zone of hyperemia surrounding the lesions.

SUMMARY

We feel that it would be worth while to summarize these cases with regard to the difference in the type of disease, dose of sulfathiazole, level of sulfathiazole in the blood, occurrence of drug fever and drug rash, tenderness in the costovertebral angle and change in blood chemistry. Our first patient was a 32 year old white woman in the postpartum period with a history of preeclampsia and with an Esch. coli urinary infection who was given a first course of sulfathiazole consisting of 150 grains (10 Gm.) administered during a period of twenty-four hours. After an interval of five days she was given 165 grains (11 Gm.) of sulfathiazole within thirty-six hours. After a forty-eight hour interval she

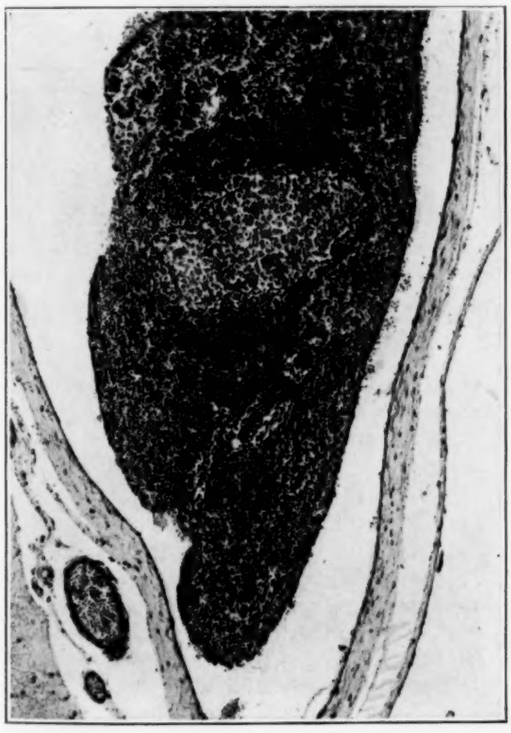

Fig. 12 (case 1).—Thrombus in renal vein containing pools of polymorphonuclear cells; × 100.

was given 90 grains during a period of twenty-four hours. The administration of sulfathiazole was stopped because of a high fever, a cutaneous rash, pain and tenderness in the right costovertebral angle, a respiratory rate of 45, a nonprotein nitrogen content of 83.1 mg. per hundred cubic centimeters and a carbon dioxide combining power of 37 volumes per cent. Twelve hours later the patient had a sudden onset of paleness, thready pulse, extreme drop in blood pressure and unconsciousness. Death occurred about one-half hour afterward.

The second patient was a 73 year old Negro woman with pyelitis associated with a stag horn calculus who was given 645 grains (39 Gm.) of sulfathiazole in continuous doses during a period of nine days. Use of the

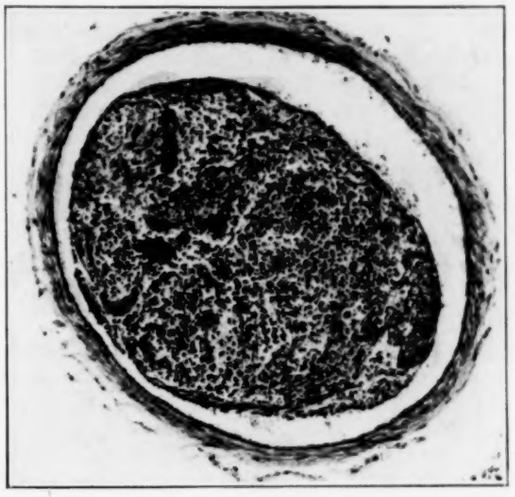

Fig. 13 (case 1).—Meningeal vessels containing an organizing embolic thrombus presenting necrotic areas and nests of polymorphonuclear cells; × 100.

drug was stopped owing to an unexplained elevation of the temperature to 103 F. The patient died two days later. A temperature of 103 to 105 F. had persisted during the two days prior to death. The patient was in deep coma for thirty-six hours before death. Further clinical details are not known. The third patient was a 73 year old jaundiced Negro man with carcinoma of the head of the pancreas, complicated by aspiration pneumonia, who received 720 grains (48 Gm.) of sulfathiazole in continuous doses (60 grains [4 Gm.] each eight hours intravenously) over a period of four days, after which he died. Coma preceded death by about twenty-four hours. There was no added rise in temperature during the period of drug administration. At no time was any cutaneous rash noted.

The fourth patient was an 8 month old Negro boy with pertussis pneumonia who received 40 grains (2.6 Gm.) of sulfathiazole during a period of thirty-six hours. He died during a paroxsym of coughing. There was no additional rise in temperature during the time of drug administration, and no cutaneous rash was noted.

The concentration of sulfathiazole in the blood did not exceed 10 mg. per hundred cubic centimeters in any of these cases. The fluid intake and the urine output were known to be adequate in cases 1, 3 and 4. All blood cultures were negative.

Pathologic Changes.—The pathologic lesions were invariably microscopic in type; grossly they were obscured by the edema and cloudy swelling. The lungs and kidneys were involved in all 4 cases. The spleen, lymph nodes and liver were involved in 2 cases. Bone marrow was obtained in only 2; typical pathologic lesions were encountered in both specimens. The characteristic lesions, as illustrated by the photomicrographs, were discrete and composed of coagulum which might or might not be infiltrated with polymorphonuclear cells. There were no zones of hyperemia surrounding these areas. Bacterial stains revealed no organisms. The lesions were similar to those seen in mice killed by excessive sulfathiazole in the diet.

CONCLUSIONS

The histopathologic lesions encountered in these 4 cases showed a striking similarity in that they were all areas of focal necrosis, many of which were infiltrated with polymorphonuclear cells. These areas occurred in the liver, spleen, bone marrow, lymph nodes, lungs and kidneys. The clinical data of the cases showed only one common factor, namely that sulfathiazole was administered. There was a decided variation in the amount of sulfathiazole given and in the duration of sulfathiazole therapy, and in case 1 there was apparently a drug sensitivity acquired by taking sulfathiazole in interrupted doses.

We do not wish to discourage the use of sulfathiazole. We desire only to point out possible dangers of the drug in addition to those that are now familiar and to speculate as to whether or not the peculiar pathologic lesion described might be a cause of death in sulfathiazole treated patients.

NOTE.—We have recently observed a fifth sulfathiazole treated patient who has the typical pathologic lesions in the lungs, liver and spleen.

THE DEVELOPMENT OF SARCOMA IN MYOSITIS OSSIFICANS

REPORT OF THREE CASES

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AND
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Myositis ossificans has been described as a deposition of bone in muscles or about their insertions and as a low grade inflammatory process characterized by the formation of bone within, or in contact with muscle.[1] The lesion involves primarily the fascial connective tissue, any muscular changes being secondary and degenerative. Aberrant osteogenesis, however, is not limited to the skeletal system and voluntary muscles. True bone formation has been reported as occurring in the meninges, brain, arteries, lungs, lymph nodes, stomach, kidneys, ureter, bladder and skin, as well as in benign and malignant tumors.[2]

Although Guy Patin,[3] in describing the woman who turned to wood, reported the first case of myositis ossificans in 1692, it was not until the advent of the roentgen ray as a diagnostic aid that the disease really became an important clinical entity and medicolegal question. Freke[4] in 1740 and Copping[5] in 1741 reported cases similar to that of Patin. In 1860 Bulhak[6] described two types of the disease—a progressive type and an isolated or circumscribed type. Von Dusch[7] in 1868 gave the disease its name, and the following year Münchmayer[8] collected 12 cases from the literature and gave an exact description of the disease. During the last three decades the literature has abounded in reports of cases and papers on the subject. Yet the incidence is undoubtedly higher than has been reported, since frequently the condition is discovered incidentally after having been present for many years.

The two types of the disease described by Bulhak have been subdivided by later writers. Shipley,[2] Gruca[9] and others have given excellent discussions of this classification. It will suffice for the purpose of this paper merely to tabulate them:

1. Myositis ossificans conscripta, generally known as the muscle osteomas, appears in sites of repeated slight injuries or irritations.

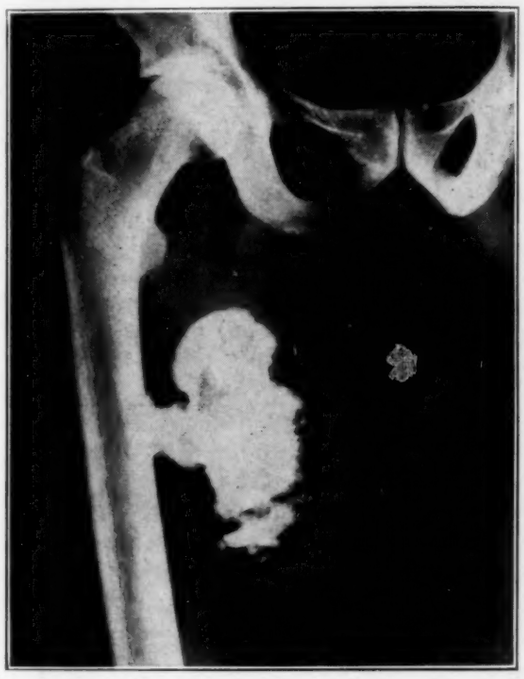

Fig. 1 (case 1).—Large ossified mass found in the upper part of the right thigh. The lower portion had undergone malignant degeneration, showing spindle cell osteogenic sarcoma.

2. Myositis ossificans, also localized to one site of the body, develops as the result of a variety of causative factors, the commonest of which is a single, severe, closed trauma.

3. Myositis ossificans localized in a single muscle without any history of trauma or other known causative factor is usually discovered accidentally.

4. Myositis ossificans progressiva usually begins in the muscles along the spine and gradually spreads until it involves all the muscles of the body possibly with death resulting because of the interference with respiration. It is usually associated with defective anatomic and physiologic formations, mostly of fingers and toes.

Numerous theories have been advanced to explain the development of these localized bony growths. Whether it is due to an implantation of periosteum in muscle, escape of osteogenic cells from the periosteum, ossifying hematoma or just a metaplasia of connective tissue cells, it must depend on some additional growth-regulating factor and/or peculiar local reaction of the tissue involved. Were this not true, myositis ossificans would be a common sequence to fracture. Shipley

From the Mixed Tumor Service of the Memorial Hospital.

1. Hobart, M. H.: Am. J. Surg. **34**: 227 (Nov.) 1936.
2. Shipley, A. M.: Ossifying Hematoma and Allied Conditions, Arch. Surg. **41**: 516 (Aug.) 1940. Huggins, C. B.: The Formation of Bone Under the Influence of Epithelium of the Urinary Tract, ibid. **22**: 377 (March) 1931. Halstead, A. E., and Christopher, Frederick: Calcification and Ossification of the Meninges, ibid. **6**: 847 (May) 1923. Phemister, D. B.: Ann. Surg. **78**: 239 (Aug.) 1923.
3. Patin, Guy, cited by Rosenstirn.[10]
4. Freke, J.: Phil. Tr., Royal Soc., No. 456, 1740, cited by DeWitt (L. M.: Am. J. M. Sc. **120**: 295, 1900) and Thomson (J. E. M.: Ann. Surg. **100**: 279 [Aug.] 1934).
5. Copping, J.: Phil. Tr., London, No. 461, 1741, cited by DeWitt and Thomson.[4]
6. Bulhak: Inaug.-Diss., Dorpat, 1860, cited by DeWitt and Thomson.[4]
7. Von Dusch, cited by DeWitt.[4]
8. Münchmayer, in Henle's und Pfeiffer's Ztschr. f. rat. Med. **34**: 9, 1869, cited by DeWitt and Thomson.[4]
9. Gruca, A.: Ann. Surg. **82**: 883 (Dec.) 1925.

points out that the systemic condition of the patient does not appear to be significant. Normal values for blood calcium, phosphorus and phosphatase have been reported. There has been no evidence of parathyroid

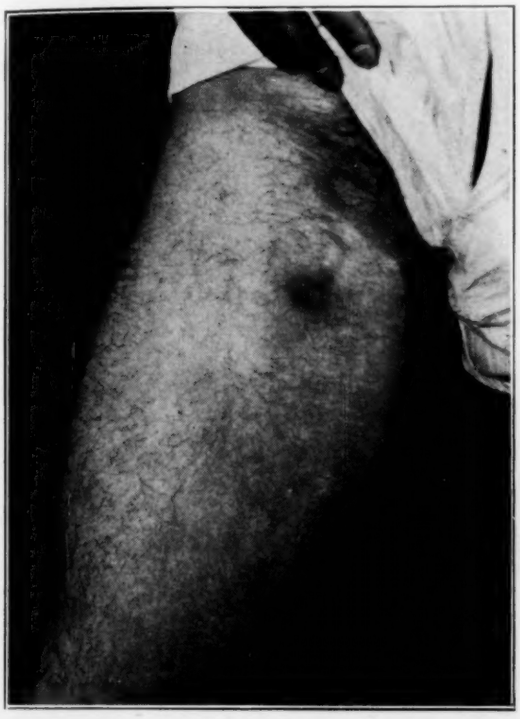

Fig. 2 (case 2).—Upper part of thigh showing recurrent osteogenic sarcoma.

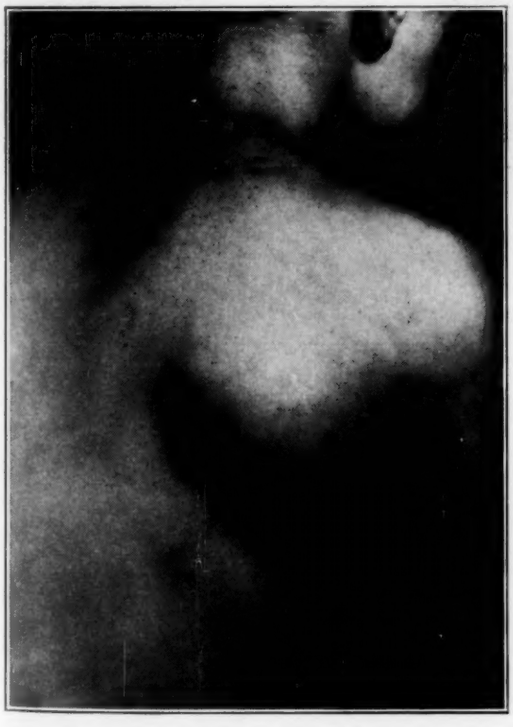

Fig. 3 (case 3).—Reproduction of infra-red photograph showing the bulging tumor mass over the right scapula and dorsum of the chest.

or of other hormonal imbalance. A shift to alkalinity of the tissue fluids, the growth of connective tissue cells and the activity of an enzyme that splits phosphoric acid from organic compounds has been cited by Wagner [10] as possible factors influencing the development of these bone tissues. Hirsch and Morgan [11] suggest the possibility of an individual diathesis or dyscrasia. Gruca demonstrated fibrocartilage to be a normal constituent in cases in which traumatic ossification occurs. Whatever the factors may be, it is generally agreed that the plates of bone arise from the connective tissue or indirectly from the connective tissue through an intermediary cartilaginous stage.

Muscles about the elbow joint and the adductors of the thigh are the most frequently involved. From a review of the literature it becomes apparent that no group of skeletal muscles is exempt.

Myositis ossificans progressiva, although it is a similar pathologic process, is distinctly and etiologically separate from the other types. Rosenstirn [12] noted a group of characteristic symptoms which sharply differentiated this condition as a clinical entity. These characteristic features are (1) the ossification of muscles

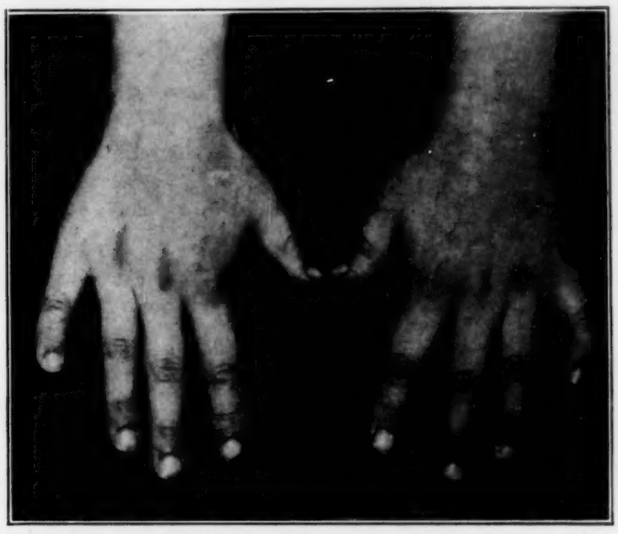

Fig. 4 (case 3).—Appearance of the hands showing microdactylia, especially noticeable in the thumbs and fifth fingers. Roentgenograms demonstrated anomalous epiphysial development in both hands.

without any apparent cause, traumatic or otherwise, (2) the manifestation of the disease as a congenital one or appearing early in life, (3) the progressive course of the malady unaffected by therapeutic efforts, embracing in some of the most advanced cases nearly the entire voluntary muscular system, (4) the association with symptoms of defective anatomic and physiologic formation, mostly of fingers and toes. Barr believes that this disease results from a true metaplasia of connective tissue to bone. Rosenstirn collected 119 cases of myositis ossificans progressiva from the literature and added 1 of his own.

Occasionally myositis ossificans may behave like normal bone in being subject to attack by further pathogenic processes. Cone [13] described a case resembling osteitis fibrosa cystica. A suppurative process analogous to acute hematogenous osteomyelitis has been reported as developing in myositis ossificans. Shipley found 4 cases recorded in the literature of the development of osteogenic sarcoma in preexisting myositis

10. Wagner, W.: Arch. f. klin. Chir. **172:** 543, 1932.
11. Hirsch, E. F., and Morgan, R. H.: Causal Significant to Traumatic Ossification of the Fibrocartilage in Tendon Insertions, Arch. Surg. **39:** 824 (Nov.) 1939.
12. Rosenstirn, J.: Ann. Surg. **68:** 485 (Nov.), 591 (Dec.) 1918.
13. Cone, S. M.: J. Bone & Joint Surg. **10:** 474 (July) 1928.

ossificans traumatica. Butler and Wooley [14] reported that a woman aged 68 had a calcified hematoma of the buttock in which a sarcoma developed. To these we wish to add 2 cases in which osteogenic sarcoma developed in preexisting myositis ossificans circumscripta and a third case in which myositis ossificans progressiva was associated with a sarcoma developing in the muscles of the back.

Fig. 5 (case 3).—Appearance of feet showing deformity similar to that seen in the hands. Roentgenograms revealed the most noticeable deformity to be present in the first metatarsals.

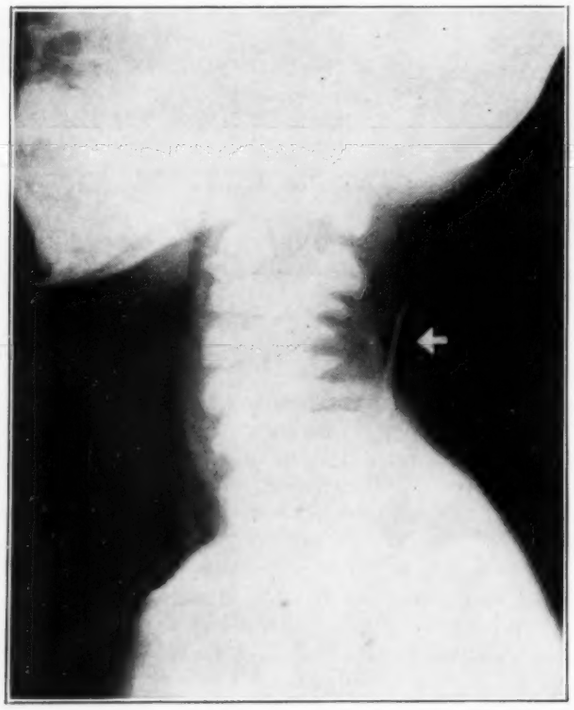

Fig. 6 (case 3).—Calcified plaques found in the posterior cervical muscles.

CASE 1.—*History.*—A white man aged 36, a salesman, admitted to the Memorial Hospital Aug. 3, 1936, complained of a tumor in the right thigh. The familial and past histories were negative.

In 1920 while running a cross country race, he injured the muscles of the upper part of his right thigh. Following this injury (the so-called charley horse), a firm, painless mass developed in the muscles of the upper medial part of the thigh and remained inactive for sixteen years. Two months before admission the upper portion of the mass became larger and was aspirated by his family physician. Approximately 4 ounces (120 cc.) of serosanguineous fluid was obtained. Roentgenograms were made revealing a large, irregular, pedunculated, calcareous mass in the soft tissues of the medial aspect of the thigh, apparently attached but not a part of the femur. The cortex of the femur was not invaded. Three weeks before admission an attempt was made to remove the mass. The tumor capsule was ruptured in removal. The wound was swabbed with acetone. The postoperative course was uneventful. The patient was referred to the Memorial Hospital for further treatment.

Physical Examination.—The patient was well developed and in fairly good general condition. The physical findings were essentially negative except for the local lesion. Over the upper inner aspect of the right thigh there was a recently healed wound 13 cm. long beneath which was an indefinitely outlined area of thickening of the soft part extending from Poupart's ligament downward about 20 cm. A roentgenogram of the chest was negative for pulmonary metastasis. The tumor was diagnosed on microscopic study as spindle cell osteogenic sarcoma.

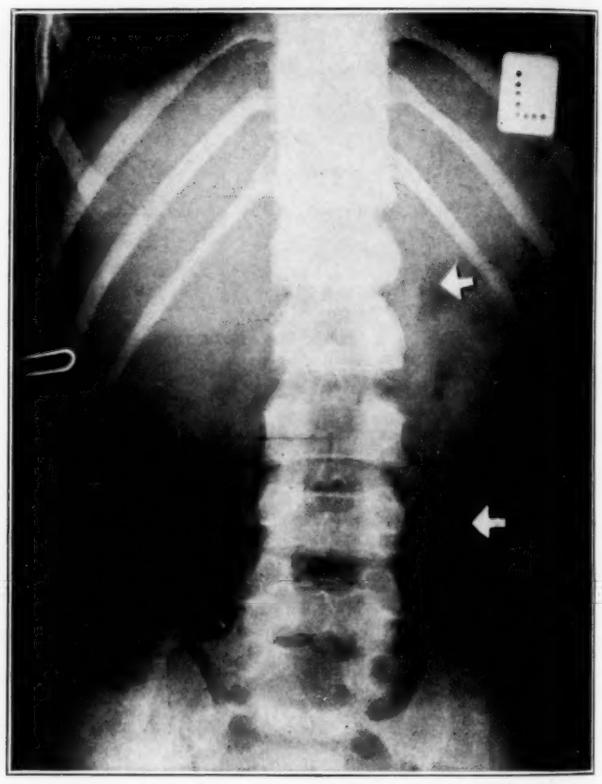

Fig. 7 (case 3).—In this view of the lumbar muscles note the large plates of ossified tissue just to the left of the midline and extending from the eleventh dorsal to the fifth lumbar vertebra.

Treatment.—Between August 4 and September 2 the tumor was treated with the 4 Gm. radium element pack, 120,000 milligram hours being given at a 15 cm. radium-skin distance. On September 17 interstitial radon was inserted for a total of 53 millicuries destroyed. Between November 9 and December 30 he was given twenty sessions of high voltage roentgen therapy, 200 roentgens each, through a circular port 10 cm. in diameter (factors, 200 kilovolts, 0.5 mm. copper filter, 63 cm. target skin distance). On Feb. 3, 1937 roentgenograms of the chest showed pulmonary metastases. The patient became progressively worse and died in July, thirteen months after the clinical onset of his disease.

14. Butler, F. E., and Wooley, L. M.: Radiology **26**: 236 (Feb.) 1936.

CASE 2.—*History.*—A white man aged 27, admitted to the Memorial Hospital Dec. 23, 1935, complained of a recurrent tumor of the right thigh. The familial and past histories were negative.

In February 1934 a tumor mass measuring 2 cm. in diameter was removed from the right thigh in another institution. A microscopic examination of the specimen was not made. In September a local recurrence of the tumor was noted. This was surgically excised at the same institution, followed by a course of high voltage roentgen therapy (factors unknown) and one course of Coley's toxins. In August 1935 a second recurrence was noted in the original scar and the patient received additional high voltage roentgen therapy before he was referred to the Memorial Hospital.

Physical Examination.—The patient was well developed and well nourished. The head, neck, chest and abdomen were essentially normal. On the anterior surface of the right thigh, over the trigone, was a healed scar in the midportion of which was a firm nodular circumscribed tumor measuring 2 by 2.5 cm. A second scar and nodular mass measuring 4 cm. in diameter was found on the posterior medial surface of the thigh below the apex of the adductor canal. The skin showed evidence of recent irradiation. A roentgenogram of the chest showed a spherical opacity in the center of the right lower lobe typical of metastasis. Examination of the femur and pelvis was negative for bone involvement. The pathologic report on submitted slides from the specimen removed in September 1934 was osteogenic sarcoma, presumably beginning in either a hematoma or myositis ossificans.

Treatment.—The patient was given twelve treatments of 200 roentgens each through a 7 cm. circular port over the tumor in the thigh (factors, 200 kilovolts, 0.5 mm. copper filter, 63 cm. target-skin distance). The pulmonary metastases were treated palliatively by roentgen rays and the radium element pack. The patient died from cerebral metastases on Dec. 23, 1936. Permission for autopsy was not obtained.

CASE 3.—*History.*—A boy aged 7 years was admitted to the Memorial Hospital complaining of a tumor mass involving the right shoulder. The familial history was irrelevant. The past history revealed that a right inguinal hernia had been repaired in infancy.

Six weeks prior to admission, a tumor was noted over the right scapula. It gradually increased in size. Nodules were removed for biopsy and the patient was referred to the Memorial Hospital for further treatment.

Physical Examination.—The patient was undernourished. The head was normal except for large tonsils. The neck showed slight limitation of motion. The lungs and heart were normal. The abdomen showed a well healed right inguinal scar. There was microdactylia of both hands and feet, especially noticeable in the thumbs, fifth fingers and first toes.

Muscular System: In the left posterior cervical region a pencil-like calcification was palpated. Two flat calcified plaques were noted in the spinous muscles, just to the left of the midline, in the lower thoracic and upper lumbar regions. These plaques of bone were freely movable in the prone position but became fixed with muscle contraction.

Local Lesion: A symmetrical, firm tumor was noted overlying the right scapula. It extended medially between the scapula and the spine as an ill defined diffuse tumefaction infiltrating the right trapezius and rhomboid muscles. It also extended upward to the supraspinous fossa, over which was a small scar of a previous biopsy. The entire scapula seemed to be pushed outward by the tumor mass.

Roentgenograms of the chest and shoulder showed no evidence of pulmonary metastasis or bone involvement. Irregular calcified plaques were noted along the right axillary line and the left cervical region, above the crest of the right scapula, along the upper portion of the humerus and in the paralumbar region on the left side. Additional skeletal roentgenograms showed an exostosis of the medial portion of the head of the right tibia and probably small osteomas with broad bases in the medial and upper portions of both tibial shafts. There was anomalous epiphysial development of the bases of the second and fifth metacarpals, and the digits showed bilateral microdactylia. Both feet showed a similar deformity of the first digits.

Treatment.—On Aug. 2, 1940 a formal biopsy of the tumor was obtained under anesthesia induced by avertin with amylene hydrate. This was reported as a malignant tumor, probably a myxoliposarcoma. Postoperative irradiation was given through two ports 17 by 7 and 15 by 6 cm., a total dose of 3,000 roentgens being given twice (factors, 250 kilovolts, 1.5 mm. copper filter, 50 cm. target-skin distance). In October a second course of irradiation totaling 2,800 roentgens was given. On November 7 two enlarged lymph nodes were noted in the left side of the neck. The upper node received 400 roentgens five times through a port measuring 8 by 4 cm. (factors, 250 kilovolts, 0.5 mm. copper filter, 35 cm. target-skin distance). The lower node received 400 roentgens five times through a port measuring 8 by 4 cm. (factors, 250 kilovolts, 1.5 mm. copper filter, 50 cm. target-skin distance). Complete regression of the tumor and the enlarged lymph nodes followed.

He was readmitted March 18, 1941 for the purpose of having a section of the myositis ossificans removed for microscopic study and determination of whether there was any disturbance in his calcium-phosphorus metabolism. On March 28 he was given 0.4 millcurie of radioactive phosphorus (P^{32}) and the following day was placed on a known calcium and phosphorus intake. One week later a section of the myositis ossificans in the lumbar region was surgically removed. It grossly simulated fairly normal bone. There was a definite periosteum covering the external surface, a well organized cortical portion and what appeared to be a marrow cavity. Microscopically it resembled dead bone in tendon or aponeurosis.

During the preoperative control period all urine and fecal excretions were carefully assayed by Dr. Helen Q. Woodard, who reported: "From March 29, 1941 to April 14, 1941 this child took a diet containing approximately 1 Gm. of calcium and 1.3 to 1.6 Gm. of phosphorus daily. He was in strongly positive calcium and phosphorus balance, excreting an average of 194 mg. of calcium and 370 mg. of phosphorus daily. The partition of calcium and phosphorus between the urine and the feces showed no gross abnormalities, though the urinary calcium was low. The findings appear to be consistent with the picture of a previously poorly nourished child recently put on a liberal diet, rather than of a child with a generalized abnormality in calcium-phosphorus metabolism.

"In the mineralized specimen removed on April 5, 1941 the phosphatase was of bone type and the activity was greater than that in any normal growing bone that I have examined. The radiophosphorus uptake was also high. Adjacent uninvolved muscle was normal in phosphatase and radioactive phosphorus. The findings indicate that the pathologic mineralization is due to local changes in the affected areas."

SUMMARY

In a brief review of the literature on myositis ossificans reports of 5 cases were found in which the bony tissue of myositis ossificans underwent malignant neoplastic change; i. e., osteogenic sarcoma developed. Our first 2 cases showed this development. In our third case myositis ossificans progressiva was associated with a malignant tumor, probably myxoliposarcoma.

York Avenue at Sixty-Eighth Street.

Food Allergy.—The principal cause of food allergy in the United States is wheat. Eggs are second. The third offender is milk. Clearly the agriculturists have a stake in the subject of allergy, and in 1936 the U. S. Department of Agriculture established a research laboratory in this field under the direction of Dr. Henry Stevens, a chemist. He is interested from the chemical point of view and also, through the collaboration of a medical man, from the clinical point of view, inasmuch as the effect of agricultural allergens on human beings is, after all, the supreme consideration.—Gray, George W.: The Advancing Front of Medicine, New York, McGraw-Hill Book Company, Inc., 1941.

CONSTITUTIONAL INADEQUACY

WALTER C. ALVAREZ, M.D.
ROCHESTER, MINN.

The main trouble with many of the patients I see every day is that they are always weak and tired and full of pains and always getting sick in one way or another. Many have been operated on several times, but still they aren't well and they cannot get about and have fun as other people do. Some of the men cannot earn a living, and many of the women complain that they haven't strength and "pep" enough to be a satisfactory wife or mother. They drag around, they cannot do their housework, and they haven't the energy to go out anywhere with their husband.

THE HOPE OF FINDING ONE CAUSE FOR THE TROUBLE

Again and again these patients go to some consultant or medical institution with the idea that this time they will get examined so thoroughly that the cause of all their troubles will be found and perhaps removed. Again and again they get overhauled, and each time the physician finds some little abnormality or physical peculiarity which he views with alarm and treats for a while.

Commonest among the diagnoses made nowadays in the hope of explaining the sufferings of these people are colitis, spastic colon, ptosis, pelvic disease, adhesions, chronic appendicitis, glandular dysfunction, low blood pressure, mild Addison's disease, low blood calcium, brucellosis and chronic nervous exhaustion. That in a given case the diagnoses made in the past were wrong and the local abnormalities found were not sufficient to explain the illness can be seen from one fact alone, and this is that the extensive treatments carried out and the operations performed in an effort to correct the supposed diseases did not put an end to the symptoms.

THESE PATIENTS ARE GETTING A RAW DEAL

Actually, as I listen daily to the stories these patients tell of their many medical adventures, I gain the disquieting impression that we physicians, in our desperate efforts to find some one bit of diseased tissue on which to place the blame for all their symptoms, are only grasping at straws. Again and again we pounce hopefully on some slight bodily peculiarity and try to correct it, only to realize after a fruitless operation or months of ineffectual treatment that we were on the wrong track. With the best of intentions we are giving these people a raw deal: doing too many things to them and wasting their money.

HOW TO IMPROVE THE SITUATION

The question then is How can matters be improved? It seems to me that, to begin with, we physicians must recognize more often and more promptly the constitutional frailness or sickliness of these patients and the inherent incurability of their disease. We must stop looking hopefully for some one lesion to explain the disability, the psychoneurosis and the aches and pains everywhere, and we must not let ourselves be led astray by those little variants from normal that we can usually turn up during an examination. And when we do recognize the functional nature of the syndrome we must not rest satisfied with the diagnosis of chronic nervous exhaustion, as so many of us are now inclined to do, but must go on to apply a label—constitutional inadequacy—which will keep reminding us that we are dealing with an inborn and essentially ineradicable disease.

From the Division of Medicine, Mayo Clinic.

HOW TO RECOGNIZE THE PATIENT

The next question is How are we to recognize these patients? Well, often it is easy. In many cases the nature of the disease can be recognized from a glance at the lengthy request for an appointment that came in the mail, written on two sides of cheap ruled paper. The long rambling tale of woe, with the evident longing for escape from a life of chronic invalidism and frustration into one of good health and happiness, gives a good idea of what is wrong.

Or when the patient walks into the office the diagnosis will be apparent. There, perhaps, will be a frail looking or scrawny woman, whose tissues were evidently made up out of poor materials. Perhaps the hand of the potter slipped a bit so that the body is poorly proportioned and poorly put together. Perhaps it looks as if, during the early years of development, the pituitary gland and the ovaries, which preside over sexual development, failed to do their job properly.

The curse of inadequacy will become even more apparent as soon as the long story is told of many illnesses, many diagnoses, much fatigue, much disability and much strenuous but futile treatment. Surely the minute the physician gets this history he should realize that he isn't going to work any spectacular cure, and he isn't going to make the patient over into a "husky," no matter how many localized diseases he succeeds in finding and removing.

It is more difficult to diagnose inadequacy when the patient is a big, well muscled man or a fine looking woman. Then the physician will have to depend on the characteristic history of repeated illnesses, many complaints and long continued and surprisingly severe disablement after every little infection, accident or operation. As a frail inadequate type of woman once said to me, "Dad may look big and strong, but let him get a pimple on his nose and he'll be laid up for two weeks, just as I would be."

Another way of recognizing the inadequate woman is to watch her as she goes through her tests; a little pain, a little diarrhea, a sleepless night, or some bad news from home, and she will be prostrated and confined to bed for a day or two.

As I have already said, the physical examination may or may not strengthen the impression that the patient is constitutionally inadequate. In a woman the uterus may be found to be infantile in type, the breasts may be poorly developed and nodular, the body hair may have a masculine distribution, the thoracic cage may be unusually long, with a narrow epigastric angle, and the pelvis may be flat and simian in type, but then again none of these physical peculiarities may be present.

SEVERAL TYPES OF THE CONSTITUTIONALLY INADEQUATE

There are several types of this disease. One of the simplest is to be found perhaps in the asthenic person whose outstanding complaint is that he cannot stand much work or excitement or loss of rest. Darwin was a beautiful example of an asthenic. For forty years he never could work more than three hours a day, and he couldn't stand the least excitement or departure from the day's routine. A trip to London, a few minutes at

a public gathering or even a quiet evening with friends, and he would be knocked out, unable to sleep, and shivering and vomiting for several days. The asthenic does not have to be at all psychopathic or inclined to complain; he just cannot stand overwork or strain.

In many inadequate women the main trouble seems to be in the pelvic organs or those glands of internal secretion which regulate menstruation. The woman may have either an infantile or a myomatous uterus, perhaps cystic ovaries and chronic mastitis. She may menstruate with difficulty, and she may be sterile. She may be frigid sexually, and she may end up before she is 40 with a hysterectomy.

In another type of inadequacy there is poor resistance to infections of all kinds and poor ability to recover from them. In yet another type there is a tendency to aching and soreness in many parts of the body. There will be backaches, headaches and arthritic, myositic, fibrositic and neuritic pains all over the body. A certain number of badly migrainous persons are constitutionally inadequate. Curious are the inadequate who become senile early in life. One finds them selling magazines and pop on trains or working as messenger "boys."

The inadequate with a neurocirculatory type of asthenia are likely to have hypertension with an irritable heart and a tendency to cardiac neurosis. They often have cold clammy hands, cyanotic legs and feet, a little albumin in the urine, dizziness on changing position, and a tendency to fainting.

Common is the type of inadequacy in which the patient complains principally of digestive troubles and in whom the symptoms are mainly those of an irritable colon, indigestion, perhaps a sore liver, poor appetite, and difficulty in eating enough to maintain normal weight. Some of the inadequate have what I call a small intestinal laboratory which allows them to digest only small amounts of food at a time. Some of them perhaps have too short a small bowel for adequate absorption. Dr. William J. Mayo used to say that at operation on these persons he often noted a flabby gastrointestinal muscle.

Still more common is the type of inadequate in whom the symptoms are predominantly those of nervousness, worrisomeness, hypersensitiveness, and a great fear of illness and death which keeps the victim running to doctors all the time. Often he goes not so much because he is ill as because he fears his discomforts are going to turn into something serious. He may go also because he cannot stand much discomfort or pain; he cannot "take it" as many normal people do, and, because of this and his fears, his behavior in the physician's office or the hospital is often peculiar and easily recognizable. It is so characteristic that when I find it in a man or a woman with a finely built body I suspect that I am dealing with an inadequate, and usually my later experience with that patient shows that I was right.

Interestingly, when this peculiar psychopathic makeup is lacking in a frailly built person and he has sufficient energy, fortitude, "guts" and "ability to take it," he never becomes an inadequate, or certainly never behaves like one. As Robert Louis Stevenson remarked after a lifetime of achievement, gained in spite of daily suffering with tuberculosis, a man has good health if he can only do without it uncomplainingly. On the other hand, many a neurotic or psychopathic person is not inadequate and never feels physically ill. Apparently it is only a certain type of neurosis or psychosis that goes with or produces constitutional inadequacy.

IS THERE A NEED FOR A SEPARATE LABEL OF CONSTITUTIONAL INADEQUACY?

Some physicians will probably feel like interrupting me at this point to ask if it is true that most of these persons are neurotic or psychopathic, why shouldn't we classify them as such and let it go at that; why bother to give them an extra label? My answer is that often I feel the need for an extra label to tell something important about a patient which other labels used alone will not tell. I find it useful to pick out of the groups of the frail looking, the husky looking, the neurotic and the psychopathic those particular persons who do not stand up well to the strains of life and cannot be made over into strong useful persons, no matter how many localized diseases are found and eradicated.

I feel the need for an extra label also when dealing with those thousands of chronically ailing persons whose symptoms seem to be due partly to a frail body and partly to a poorly functioning brain. For them I like an omnibus term like constitutional inadequacy. Incidentally, some physicians may ask Why not use the term constitutional or biologic inferiority? and my answer is that this term is likely to be offensive to the patient. Many a person who might object to being called inferior will admit freely that he is inadequate to stand up well to the stresses of life. If I see that a patient is a bit cast down over this idea, I try to cheer him by pointing out my own woful inadequacy to earn a living as a prize fighter. Thus I get him to see that not all of us in this world can be strong enough for every type of work, and some must take the easier jobs.

Certain it is that to recognize early the presence of constitutional inadequacy is to save a patient much futile treatment and perhaps several largely useless operations. For instance, let us consider the problem of a young woman with menstrual pain so severe that she has to keep to her bed for a day or two out of every month. If she is otherwise healthy and strong, a surgeon can go ahead and resect the presacral plexus with much hope of working a cure; but, if after talking to her awhile he concludes that she is an inadequate person, he may well refuse to operate because he will then have little hope of making her over into a strong, healthy woman.

It is helpful also in many cases to apply a label which will show the essential unity of what, at first glance, appeared to be a group or a series of unrelated diseases. For instance, let us turn to the record of a frail schoolteacher who, years ago, broke down and became tired out and full of misery. At a university clinic to which she went, the gynecologist blamed dysmenorrhea for her troubles, the endocrinologist blamed a pituitary-ovarian dysfunction, the neurologist blamed a severe migraine, the psychiatrist blamed overwork and a poor adjustment to celibacy, the orthopedist blamed a twisted spine, the gastroenterologist blamed a "colitis" and the surgeon blamed the appendix.

Who was right? Well, let us see: During the years that followed, resection of the presacral plexus stopped the menstrual pain, the headaches were relieved by ergotamine tartrate (gynergen), the giving up of the job removed the main cause of fatigue, marriage put a stop to many psychic conflicts, physical therapy helped the back, diet and enemas kept the colon fairly comfortable, and the appendix was removed. But the woman didn't get well! She went on being tired and full of misery, and then gradually it dawned on every one who was taking care of her that, from the beginning, all her troubles had been but manifestations of a constitutional

inadequacy. Now, if this basic defect had only been recognized at the start, as I think it could have been, the woman and her husband could have understood better what they were up against, and if in those early years they had acquiesced to the situation they could have saved the thousands of hard earned dollars they spent on several wild goose chases after health.

Another time when I feel the need for an extra label is when I see a patient who has some organic disease, such as duodenal ulcer, but who owes practically all his discomfort and disability to constitutional inadequacy. In such cases I like to recognize the inadequacy early before I waste much time on treatments which, even if they should heal the ulcer, cannot put the patient back to work.

COMMON COMPLAINTS OF PATIENTS WITH CONSTITUTIONAL INADEQUACY

Now, what are the common symptoms of inadequacy? As the reader will already have gathered, the symptoms are many. Perhaps the commonest are those of excessive fatigue and a lack of energy and reserve strength. Other common complaints are aches and pains everywhere, nervousness, faintness, dizziness, indigestion, poor appetite, loss of weight, regurgitation, a sensitive colon, constipation, palpitation, clammy hands, cardiac neuroses, defective or painful menstruation, dyspareunia, sterility, poor resistance to infection, slow recovery from any illness or injury, insomnia, "chronic fever," "weak eyes" and an irritable bladder.

THE DIAGNOSIS

Inadequacy must always be suspected whenever it is noted, first, that nervous prostration, disabilities of various kinds and feelings of great fatigue have been present for years without bringing disaster. Sometimes the patient will even end up in the fifties looking fat and healthy. Second, that the severity of the symptoms is out of all proportion to whatever slight deviations from normal can be found on a thorough overhauling. The essential point which can and should often be made to a patient is that even if she had the gallstones her home physician feared she had, she wouldn't be anywhere near so ill and prostrated as she is. Third, that the aches and pains are scattered too widely over the body to be explained on the basis of any one lesion. If the woman had the disease in the appendix that she thinks she has, this might account for her indigestion and part of her abdominal distress, but it couldn't account for the rest of her many symptoms. Often I tell a highly nervous woman what I think is a fact, and that is that there is no disease of the abdominal organs which can produce a psychoneurosis. That must arise in the brain.

The diagnosis of inadequacy with hypersensitiveness and neurosis is often made or strengthened as the physician watches the way in which a woman behaves in the office as she submits to the several examinations. She may lie around apathetically, as if too tired to sit up; she may go around in a wheel chair which she could easily do without; she may complain bitterly about procedures which do not bother most patients; she may be prostrated by every little discomfort, and she may be hard to handle.

And when the physician starts treating her, again he is likely to get information of much diagnostic value. At the hospital she may be upset by small discomforts and annoyances, and everything that is done for her may make her worse. Drugs will have unexpected, abnormal and disturbing effects, sedatives will work like excitants, and a soft diet may cause her more distress than she had on a full diet. In spite of a high caloric intake she may lose weight.

THE CAUSE OF THE TROUBLE

Whatever the cause of this protean syndrome is, I am sure it is not to be found in any disease in any one organ, unless it is the brain. Actually, in most cases I feel sure the primary constitutional weakness is in the nervous system. I feel sure of this because (1) I have found constitutional inadequacy sometimes in finely built men and women, and (2) I have found it so often in the relatives of the insane. I believe the severe forms of constitutional inadequacy are commonly equivalents of insanity. Interestingly, it has been shown that most of the soldiers with "disordered action of the heart," who so often end up as inadequate veterans, have near relatives who are insane.

In some cases poor materials seem to have gone into almost every organ of the body. Certainly there must be a tremendous difference between the original physical endowment of one of these frail, always ailing persons and that of a man who, after eighty years of good health, still has his hair, his teeth, his eyesight and plenty of energy.

Although the symptoms of inadequacy may not show up until a woman is over 20, the defective tissues must have been there from birth. Naturally, like the walls of a defective tire they are likely to hold well for some time before they blow out. Some persons with an inheritance that predisposes to inadequacy can remain well for years if they can only be spared adversity, overwork, infections, accidents and operations. It is doubtful that typical inadequacy can ever be produced by suffering and disease if good materials went originally into the construction of the person's body. Certain it is that many persons with a good nervous inheritance will stand years of suffering without showing signs of inadequacy. I remember a merry, dynamic, able woman who kept on running a business for years after she was almost ossified by a painful form of arthritis.

The main defect in the inadequate person seems often to be a lack of that something in the brain that keeps most persons feeling well and unconcerned about health. Perhaps it is this same something that keeps most of us hopeful when we are ill or enables us to accept discomforts and disasters and to carry on cheerfully in spite of them.

I feel sure that many inadequate persons are tired most of the time because they use their brains so unwisely and waste so much energy on foolish thinking, silly worrying, conscience searching, jealousies, flare-ups of temper, conflicts with people, and riots of emotion. We healthy persons would be tired out too if we were to use our brains so uneconomically.

THE HEREDITY OF THE DISEASE

As I have already said, constitutional inadequacy is inherited from forebears who suffered either from inadequacy, frailness of body, poor pituitary development or some form of psychopathy. Here, let us say, is Bill Jones, who all his life is going to suffer from such fatigue and lack of energy that he will be unable to earn a living. My impression is that if he had received at his conception all the bad genes that Grandmother Jones had to hand on he would have ended up in the insane asylum with melancholia just as she did, but, seeing that the bad genes derived from her were diluted by fairly good ones from three other grandparents, all Bill got was a bad case of that tired feeling. Variants

of insanity commonly heard of as one takes the history of the patients with severe forms of constitutional inadequacy are shiftlessness, eccentricity, vagabondism, solitariness, dipsomania, suicide, stammering, enuresis, pathologic temper and feeblemindedness.

Often I have been impressed by the fact that in certain families constitutional inadequacy, psychopathy or neurosis, and abnormalities in the functions of the glands of internal secretion seem to be inherited, sometimes together and sometimes sorted out. From this I gain the impression that the genes for these defects are sometimes linked and sometimes separated.

TREATMENT

As already pointed out, we physicians must become more conscious of the importance of this problem of constitutional inadequacy, and we must become more adept at recognizing the victims when they first begin to break down. We must spot them soon after they come into the office. After recognizing them we must spend much time with them, trying to get them to understand the situation, to acquiesce to it and to stop hunting for a complete cure. When they will permit us to use our judgment as to the tests worth making and the treatments worth trying, we can save them from the wastage of much money.

We must learn the technic of explaining the situation to them so that they will accept our verdict without annoyance or rebellion and will decide to mend their bad psychic ways, to hoard their energies and to live within their limited means of strength. Oftentimes we can make these persons self supporting or at least less of a burden to their relatives than they were before, by encouraging them to find work that they can do without breaking themselves down. Often we can give them hope and encouragement by telling them what is true, and that is that some of the best work of the world has been done by frail persons who suffered from poor health all their days. I often point to Darwin, who, by working only a few hours a day, published a long series of papers and books and changed the thought of the world.

Sometimes the constitutionally inadequate man greatly needs the physician's help in getting his family or, more important yet, his wife's family, to understand the situation so that they will stop blaming him for his failures to work steadily and to succeed well in life. Women often need similar help so that the husband will understand the situation and will be more sympathetic and helpful.

SUMMARY

Many of the chronically ailing patients seen daily by medical consultants are constitutionally inadequate persons, unable to stand up well to the strains of life. They cannot be cured, as they hope to be, by the discovery and eradication of any one local disease.

By grasping desperately at diagnostic straws, by carrying out extensive treatments and performing operations on these persons, we physicians, with the best of intentions, often do them injury, and waste their money and our time.

We must learn to recognize these persons and their symptoms more often and more quickly so as to save them expense and trouble. In many cases the basic weakness is in the nervous system. In bad cases the disease seems to be an equivalent of insanity. In other cases it goes with an inheritance of a frail body and defective glands of internal secretion.

Treatment must consist mainly of keeping the patients from doing foolish things and wasting money. They must be taught, if possible, to acquiesce to the situation, to stop hunting for a complete cure, to hoard their energies and to find a job that can be done without too much fatigue.

In times of war every effort must be made to keep the constitutionally inadequate out of the army. All they do is to break down and go on the pension roll.

STUDIES ON THE CONTROL OF ACUTE RESPIRATORY INFECTIONS

I. PRELIMINARY REPORT ON THE ORAL ADMINISTRATION OF SULFADIAZINE AT THE ONSET OF ACUTE RESPIRATORY ILLNESSES

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The successful treatment of pneumococcic, streptococcic and other bacterial infections of the respiratory tract with sulfonamides has led to a consideration of their use in the prevention of these infections and their complications. For this purpose sulfadiazine [1] was chosen because of the early reports on its relatively low clinical toxicity and its high therapeutic effectiveness [2] against different bacterial pathogens of the respiratory tract. This preliminary report deals with the clinical conditions found in patients treated at the onset of symptoms of acute respiratory infections as compared with those who were not treated with sulfadiazine.

PLAN OF STUDY

The study has been conducted at Letchworth Village, a New York state institution for mental defectives. It was carried out among the group of children

From the Public Health Research Institute of the City of New York.

The sulfadiazine was supplied by Lederle Laboratories, Inc., Pearl River, N. Y.

Aided by a grant from the Metropolitan Life Insurance Company on the recommendation of the Influenza-Pneumonia Commission.

The physicians at Letchworth Village, particularly Dr. Harry C. Storrs, superintendent, Dr. Herman Alpert and Dr. Nathaniel Bernstein, aided in this work.

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with the lowest mental rating who were highly susceptible to respiratory infections and who usually had an annual pneumonia incidence of more than 10 per cent. These children were confined to two cottages, the boys to cottage Iota and the girls to cottage Y. Each cottage had about 130 inmates varying in age from 2 to 14 years, the average being about 8 years.

In cottage Iota the inmates were allocated to a sulfadiazine treated and a control group in alternate order of admission to the institution. The average number in each group throughout the test period was about 65. The groups were comparable in respect to physical and mental characteristics, age, weight, duration of residence at the institution and incidence of endemic respiratory infections and pneumonia.

In cottage Y definitive test groups were not chosen for the duration of the study. Instead, alternate patients with acute respiratory illnesses were treated with sulfadiazine.

The sick children in each cottage were put to bed in their respective dormitories as soon as any symptoms of infection were recognized. They received the routine type of treatment employed in the cottage. This consisted of bed rest, enemas, fluids, acetylsalicylic acid and local applications as needed. In addition, the group treated with sulfadiazine received the drug from the time of onset of recognizable symptoms of respiratory illness.

Patients requiring hospital care were transferred to the hospital maintained at the institution. Here the type of treatment depended on the nature and severity of the illness and not on the test group to which the patient had been assigned in the cottage.

The dosage of sulfadiazine employed in this study varied with the weight of the affected child and the temperature. For children weighing less than 50 pounds (23 Kg.) and having a rectal temperature of less than 102 F. at the onset, the initial dose was 1 tablet of 0.5 Gm., followed by two doses each of 0.5 Gm. at four hour intervals. After the first day, 1 tablet of 0.5 Gm. was given three times a day at 8 a. m., noon and 4 p. m. For children weighing more than 50 pounds or for those having a temperature of 102 F. or more at the onset, the intial dose was 1 Gm., followed by three doses each of 0.5 Gm. at four hour intervals. Their daily maintenance dose was 4 tablets (2 Gm.) given in four doses between 8 a. m. and 8 p. m. The drug was given for at least three or four days or until the rectal temperature had been less than 100 F. for twenty-four hours.

RESULTS

The test period in cottage Iota began on Dec. 14, 1941, and from this date to Jan. 17, 1942 79 patients with colds were observed, 8 the first week, 7 the second, 10 the third, 35 the fourth and 19 the fifth.

There were 39 in the sulfadiazine treated group and 40 in the control group.

The number of clinical infections was equally distributed between the test groups. The frequency and severity of the acute respiratory illnesses increased after December 28 and reached epidemic proportions between January 4 and January 17, when about 40 per cent of each group was affected. During this period the predominant symptoms were coryza and cough. Many of the infections of the upper respiratory tract were severe and were associated with a high incidence of acute bronchitis and pneumonia.

Hospitalization was required by 12 (30 per cent) of the control group and 2 (5 per cent) of the sulfadiazine treated group. In 1 case of the treated group the temperature was 105.6 F. on the first day of illness when pneumonia was suspected, 99 F. on the second day and 103 F. on the third day, when a definite diagnosis of pneumococcus type XVIII A (Dougherty) [3] lobar pneumonia was made. In the other case the temperature was 106 F. when the illness was first recognized, and the patient was at once transferred to the hospital after having received an initial dose of 1 Gm. of sulfadiazine.

Of the 12 control patients who were hospitalized, 6 had pneumonia. Type I pneumococcus pneumonia occurred in 4 of these cases: 2 were recognized within twenty-four hours after the first signs of illness were observed, the third within seventy-two hours after the onset and the fourth case after nineteen days of intermittent fever, nasal discharge and cough. In the remaining 2 cases of pneumonia, signs of consolidation were recognized two and six days, respectively, after the first symptoms of illness were noticed. The latter patient died shortly after admission to the hospital. Of the remaining 6 hospitalized control patients, 3 had acute bronchitis and 3 nasopharyngitis.

Hospitalization was not required in 37 (95 per cent) of the sulfadiazine treated group and 28 (70 per cent) of the control group. A fall in temperature after the first day's treatment with sulfadiazine occurred in 35 (90 per cent) cases, while in 2 (5 per cent) there was a transient exacerbation of fever within seventy-two hours after withdrawal of the drug. After the first day's treatment in the control group there was a fall in temperature in 14 (35 per cent) cases, while an equal number showed a rise in temperature after routine treatment in bed had been instituted.

When the temperature remained below 102 F. there was no significant difference in the duration of fever between treated and control groups. However, the difference was considerable among those whose maximum temperature was 102 F. or over. In these cases fever persisted for only one to two days in 60 per cent of the treated group as compared with 10 per cent of the controls, for three to five days in about 30 per cent in each group and for more than five days in about 10 per cent of the treated group as compared with 60 per cent of the controls. The average duration [4] of fever after the first day's treatment had been instituted was 1.6 days in the sulfadiazine treated group and 4.2 days among the controls.

In cottage Y, the test period began on Jan. 19, 1942 during the latter part of an outbreak of severe acute respiratory infections with a high incidence of pneumonia and acute bronchitis. During a two week period of observation from January 19 to January 31 there were 18 cases, 9 each in the control and sulfadiazine treated groups.

In the sulfadiazine treated group of cottage Y, the temperature of every patient treated for at least one full day dropped within twenty-four hours. On the second day of illness, all but 1 had temperatures below 100 F. throughout the day and did not appear toxic. In 1 patient pneumonia was suspected at the onset, and the child was transferred at once to the hospital after an

3. The typing was done by the Pneumonia Division of the Department of Health of New York City.

4. In the calculation of the average duration of fever, illnesses of ten days or longer were each considered as ten days to offset the influence of extreme values. This favored the control group, which had 6 such cases as compared with 1 in the sulfadiazine treated group.

initial dose of 1 Gm. of sulfadiazine had been given. Two patients had secondary rises in temperature for one day on the fourth and sixth days, respectively, within twenty-four to forty-eight hours after discontinuation of sulfadiazine.

Of the 9 control patients, only 2 recovered promptly after the first day's observation. The others were quite sick for a few days; they were restless and apathetic and refused to eat. They lost considerable strength and weight during the illness and had a prolonged convalescent period. Two control patients were sent to the hospital, 1 on the fourth day of illness with an acute bronchitis of undetermined etiology, the other on the first day of illness with bronchopneumonia attributable to pneumococcus type V. This same type of pneumococcus was responsible for at least 2 other cases of pneumonia in the early part of the outbreak.

On February 21 a second outbreak of respiratory infections occurred which affected 12 inmates within ten days in cottage Y. They all had a nasopharyngitis with considerable coryza; a few also had bronchitis. There were no cases of pneumonia and little evidence of toxicity. Most of the affected children were usually active and playful and maintained good appetites throughout these illnesses.

The dramatic drop in temperature that was observed within twenty-four hours after the use of sulfadiazine during the first outbreak did not occur with the same regularity again. In 2 cases the initial infection did not seem to be modified by the use of sulfadiazine, and the temperature remained high for three days. In one of these cases the sulfadiazine level on the third day was 5.1 mg. per hundred cubic centimeters and in the other case it was 3.8 mg. per hundred cubic centimeters. At the end of five days the temperature was normal and remained normal. The controls recovered without difficulty except for 2 patients. One had a nasopharyngitis of undetermined etiology while the other had an acute bronchitis attributable to pneumococcus type V. Significant organisms were isolated in only 2 other cases—pneumococcus type XI A (Gorman) in one and Streptococcus hemolyticus in the other. Single throat smears in the early acute stage in the remaining 9 cases were negative.

After the first day's treatment, the blood level of free sulfadiazine [5] usually varied from 4 to 6 mg. per hundred cubic centimeters during the period in which the drug was employed. The maximum level reached was 12 mg. on the fifth day of treatment in a child weighing 47 pounds (21 Kg.) and receiving 1.5 Gm. daily. With the dosage employed there were no gross ill effects except for a transient rash which developed in 1 case after five days of treatment.

COMMENT

In this preliminary study on the use of sulfadiazine at the onset of symptoms of respiratory illnesses, it was found that most of the patients receiving sulfadiazine improved after twenty-four hours, a few had a secondary rise in temperature within seventy-two hours after premature withdrawal of the drug and some showed no evidence of improvement.

For the first twelve hours after treatment was begun there was often no perceptible difference between treated and control cases. Within twenty-four to thirty-six hours, however, there were usually signs of improvement in the treated group. The temperature fell and remained low. The patient appeared less toxic. His appetite returned and he was no longer restless and apathetic but brighter and more cheerful. Signs of infection, such as coryza and cough, still persisted in many cases, but the infection appeared to be subsiding, as if the inflammation had abruptly passed the acute stage. Most patients showed no exacerbation of the infection when the drug was discontinued after four days of treatment. Some children, particularly those who appeared to be seriously sick at the onset or who had persistent discharge and other evidence of infection, required treatment beyond the four day period. Premature withdrawal of sulfadiazine in these cases resulted in a secondary rise in temperature within seventy-two hours, which usually dropped to normal on reintroduction of the drug. On the whole, therefore, the infection usually appeared to be checked within twenty-four to forty-eight hours after administration of the drug and usually remained under control.

On the other hand, the course in the control group was unpredictable. An occasional patient with high fever at the onset quickly recovered, while other patients who started with low temperatures developed secondary complications. In general, although most of the control children recovered promptly and without complications, some did not, while 1 died. There was usually no way of foretelling the outcome in this group. Those whose temperatures remained below 102 F. usually did as well as those in the treated group. However, there was no way of telling who would have a rise in temperature, when it would occur and what the course of infection would be.

In one small outbreak of relatively mild infection of the upper respiratory tract, the course of the initial infection did not appear to be modified by the use of sulfadiazine. A secondary rise in temperature was not noted. It is a reasonable assumption that this outbreak was due to some agent, probably a virus, not susceptible to the action of sulfadiazine.

The favorable results obtained with sulfadiazine are attributable to its effectiveness against many of the pathogenic organisms which are active in acute respiratory infections. The role of these infecting agents in producing respiratory illnesses under various conditions is not thoroughly understood at present. Any measure, however, which is effective against the pathogens at their source should contribute to the control of these infections. The extent to which respiratory infections can be safely controlled by the use of sulfonamides remains to be investigated on an etiologic basis.

SUMMARY AND CONCLUSION

Clinical observations on the value of sulfadiazine when administered at the onset of recognizable symptoms of respiratory illness in a highly susceptible group of mentally defective children—the group being divided into 54 children treated with sulfadiazine and 55 control patients observed between Dec. 14, 1941 and March 2, 1942—show that usually those treated with sulfadiazine appeared less toxic after twenty-four hours and recovered more promptly than the controls. In some cases, however, the initial infection was not modified by sulfadiazine therapy in the dosage employed.

Judging from these preliminary observations among highly susceptible children, it appears that sulfadiazine can be advantageously employed early in the course of many acute respiratory illnesses. In some cases such a procedure might be an early form of therapy, in others a prophylactic measure.

Foot of East Fifteenth Street.

5. Determined through the courtesy of Dr. Jesse G. M. Bullowa at Harlem Hospital, New York.

HEREDITARY DEFORMING CHONDRODYSPLASIA

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Hereditary deforming chondrodysplasia [1] is a distinct clinical entity, easily recognized and presenting an unmistakable clinical morphologic, histologic and roentgen appearance. It is a relatively rare condition.

The first recorded case [1a] appeared in a Guy's Hospital report in 1825; the first in American literature, not until Gibney's [2] report in 1875. Since the publication of two excellent papers by Ehrenfried [3] in 1915 and 1917, the number of reported cases has increased many fold. Most clinicians still fail to recognize this condition. Textbooks of pathology make brief mention, and medical dictionaries confuse it with other conditions.

NOMENCLATURE

It is our belief that the undeserved slighting of this interesting condition is due largely to the unfortunate habit of each writer's devising a new name for the condition, based on some clinical or pathologic peculiarity or other whim. While it is obviously desirable for names of diseases accurately to describe them, a still more important function is that their names should identify them. In a not too comprehensive survey we found the following appellations for this disease: multiple exostoses, multiple cartilaginous exostoses, multiple cancellous exostoses, multiple congenital osteochondroma, chondral dysplasia, diaphysial enchondrosis, laminated exostoses, ossified diathesis and dyschondroplasia, in addition to the designation used in this paper, hereditary deforming chondrodysplasia. We have arbitrarily accepted this title.

DESCRIPTION OF THE DISEASE

Ehrenfried calls attention to the three most striking features of the disease by stating that it is "characterized by (1) the occurrence of multiple more or less symmetrical cartilaginous and osteocartilaginous growths within and upon the skeletal system, generally benign, and resulting from a disturbance in the proliferation and ossification of the bone-forming cartilage; (2) the occurrence of certain typical secondary distortions and deformities of the skeleton, and (3) the demonstration of inheritance in a large proportion of the cases." In the light of present knowledge we would amend his definition by saying that the pathologic picture is that of a disturbance in bone development most noticeable in the metaphysial ends of the long bones and leading to expansion of the ends, profound alteration in their architecture and the development of cartilaginous masses within the bone (enchondroma) and projecting from it (exostoses), and also narrowing and irregularity in the epiphysial cartilages, which tend to unite prematurely.

The most prominent feature is the presence of bony outgrowths. They take the form of cartilaginous knobs, spurs and pedunculated masses, which may attain a large size. Structurally these protuberances are cartilaginous in the beginning, but, as they become larger and older, cancellous bone forms in the center so that they may be designated either as chondroma or osteochondroma, depending on the stage of development. McCallum [4] states that they "appear about epiphyses in young persons and are left along the shafts as the bone grows." Histologically the growths are identical with exostoses due to trauma or infection, but the associated metaphysial disease distinguishes it from the other condition.

The entire metaphysis is expanded, producing a typical trumpet-shaped or boxlike end best developed at the lower end of the femur and the upper end of the tibia. Trabeculation is distorted and irregular and calcification is not uniformly dense. Throughout the substance there may be bubble-like vacuolations resembling bone cysts when seen on the roentgenogram. These are the sites of enchondromas. They are more common in the small bones of the wrist and ankle than in the long bones.

Irregularities in shape and structure are usually present in the epiphysial cartilages. They tend to unite prematurely with the shaft, producing the shortening and dwarfing so often seen in the cases of more severe involvement.

There is a great tendency for bony fusion to occur between the lower ends of the tibia and fibula and of the ulna and radius. Since there is commonly a difference in the degree of arrest of growth in the fused bones, various deformities are brought about, such as changes in direction of the articular surfaces, dislocations and false articulations and bowing and spiral twisting of the shafts. There may be ulnar displacement of the wrist, or "clubhand." Knock knees and valgus deformities of the foot are often striking.

The exostoses produce remarkably little interference with function because of their peculiar tendency to point away from the joint. However, when they are of large size they may be not only inconvenient but actually harmful if they press on nerves, the spinal cord, blood vessels and other structures. They may block the birth canal in parturient women. The tumors themselves are painless but surrounding and overlying tissues may become inflamed and tender because of trauma.

Although the exostoses are the most prominent lesions, and they are usually responsible for the patient's seeking medical advice, the disease is not to be diagnosed on their presence alone but rather on the complex picture of disturbed growth, of which the exostoses are only one evidence. In fact, exostoses are not invariably present, for Blount [5] described what appears to be an authentic case in which they were absent, and Alley [6] found diaphysial changes in the youngest child of an affected family, which he believed constituted a preexostotic stage.

[1. NOTE.—The nomenclature of the disorders discussed in this paper has been studied in connection with the recent revision of the Standard Nomenclature of Disease. The entries in the book do not conform with the recommendations in this paper; e. g., dyschondroplasia is preferred to chondrodysplasia, and multiple osteocartilaginous exostoses is not considered an identical disease.—ED.]

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4. McCallum, quoted by Gorsaline, C. S.: Familial Deforming Chondrodysplasia: Multiple Exostoses, Am. J. Roentgenol. **6**: 271-278, 1919.

5. Blount, W. P.: Chondrodysplasia, Am. J. Dis. Child. **40**: 327-333 (Aug.) 1930.

6. Alley, Reuben G.: Hereditary Deforming Chondrodysplasia, Radiology **28**: 544-551, 1937.

PROGNOSIS

The disease is distinctly one of growth. Lesions may be present at birth or develop during childhood, but as maturity is attained they become inactive. It is even claimed that some of the lesions regress in later years. Pedunculated tumors, however, may continue to grow for many years during adult life. Rapid increase in size and the onset of pain suggest that sarcomatous changes are appearing, but such changes occur in a very small percentage of cases, probably less than 5 per cent.

HISTOGENESIS

It was long believed that the lesions were limited to those bones which embryologically arise in cartilage. On the basis of this belief a number of theories of histogenesis have been evolved. Keith [7] pictures the defect as arising from the failure of diaphysation or tubulation, which leaves a broad unmolded zone of bony tissue between the growing end and the shaft, from which protuberances grow "as a secondary result of the primary disorder of growth."

Geschickter's [8] view is that there is a defect in the development whereby islets and strands of primitive cartilage persist throughout the metaphysis. Their growth produces masses of cartilage which distort the architecture of the bone and which tend to grow outward and to project through defects in the overlying, limiting periosteum, thereby producing exostoses.

Both theories locate the defect at the stage of transition from cartilage to bone. Neither view can be harmonized with the finding of changes in bones which arise directly from primitive membrane without the intermediation of cartilage, yet there are a number of instances of exostoses arising from the skull bones, and Mahorner [9] describes a fine mottling of the skull due to irregular calcification in 1 of his cases.

It seems to be more in keeping with the facts to assume that there is an inherited defect in the primitive anlage for both cartilaginous and membranous bone, producing disturbances of bone formation which are expressed as growth occurs and hence are most pronounced at the points at which growth is most active, namely at the growing ends of the long bones. The comparative immunity of carpal and tarsal bones, vertebrae and the bones of the skull is due to their slow rate of growth. Similarly, the phalanges are less often and less severely affected than the femur simply for the reason that phalangeal growth is to be measured in millimeters whereas the growth of the femur is measured in centimeters.

The distribution of lesions supports this belief, for we find that the most frequent and extensive involvement occurs at the ends of the femur, tibia, fibula, radius, ulna and humerus.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of this disease from benign and malignant neoplasms, traumatic exostoses, multiple myeloma, rachitis and tuberculous, syphilitic and chronic infectious osteomyelitis and periostitis presents few problems if the distinctive features of hereditary deforming chondrodysplasia are recalled: the expanded metaphyses, multiple exostoses, frequent endostoses, the characteristic distribution of the lesions, the shortening, torsion and deformities of the long bones and frequent fusion of the ulna with the radius and the tibia with the fibula, and the history of similar deformities in other members of the family.

The disease is more difficult to differentiate from some of those rare bone conditions whose distinguishing features are not clearly defined and descriptions of which are not available in most reference books. We must also include in the list a number of conditions which present no clinical similarities but whose designations are so similar as to require definition. A few of these conditions will be described briefly.

Ollier's disease is considered by many to be a subvariety of hereditary deforming chondrodysplasia. Differentiating points are the unilateral or asymmetrical distribution, the large number of enchondromas, infrequent exostoses and moderate enlargement of the diaphysial ends. Heredity is not a striking feature.

In Albers-Schönberg disease, variously called osteopetrosis, osteocretosis, osteosclerosis, fragilitas or osteosclerosis with anemia, exostoses occur but are not common, and the metaphyses may be expanded but not so much as in chondrodysplasia. They show stippling with densely opaque deposits. The lesions are not limited to the ends of the bones but involve the shaft as well.

In Voorhoeve's disease there may be metaphysial enlargement and some exostoses. The condition is distinguished by fine longitudinal striations due to incomplete calcification.

Osteodystrophia fibrosa is characterized by precocious puberty, a yellowish pigmentation of the skin and a progressive generalized fibrocystic disease of the skeleton. The clear cystic areas may be confused with the vacuolations due to the enchondromas of chondrodysplasia.

Osteodystrophia fibrosa unilateralis of Freund is characterized by facial dyssymmetry, unilateral distribution and involvement of the whole diaphysis as well as the metaphysis. The roentgen appearance is that of a diffuse cystic change and is due to resorption of bone along the haversian canals. The parathyroid function is normal.

Achondrodysplasia is a disease primarily of the epiphyses which unite prematurely with the diaphyses, producing dwarfs with very short extremities and normal trunks.

Chondrodystrophia, or Morquio's disease, is more closely related to achondrodysplasia than to chondrodysplasia. There is early cessation of growth of the epiphyses and a flattening of the vertebral bodies leading to severe kyphosis and great shortening of both trunk and extremities.

The osteochondritides include a group of dystrophies of the epiphyses. When the process is confined to the head of the femur it is known as Calvé-Legg-Perthes disease; when limited to the tibial tubercle it is called Osgood-Schlatter disease; involvement of the scaphoid, tarsal or second metatarsal bones is known as Koehler's disease or Freiberg's infarction, and disorder of the vertebral epiphyses constitutes Scheuermann's disease.

Chondro-osteodystrophy or gargoylism is characterized by clouding of the cornea, mental retardation,

7. Keith, cited by Campbell, H. E.: Hereditary Deforming Chondrodysplasia: Report of Three Cases, J. Bone & Joint Surg. **7**: 982-996 (Oct.) 1925.
8. Geschickter, Charles S., and Copeland, Murray M.: Tumors of Bone, ed. 2, New York, American Journal of Cancer, 1936.
9. Mahorner, Howard R.: Dyschondroplasia, J. Pediat. **10**: 1-26 (Jan.) 1937.

enlarged cranium, great distortion of the facial bones, kyphosis, premature epiphysial union and hepatosplenomegaly.

In xanthomatosis, or Schüller-Christian disease, there is absorption of the bones especially of the skull and replacement by lipoid deposits. Exophthalmos and diabetes insipidus are usually associated.

Osteogenesis imperfecta, osteopsathyrosis, fragilitas ossium or Lobstein's disease is a myeloplastic malacia which may or may not be hereditary. There is a deficiency in subperiosteal bone production.

Von Recklinghausen's osteitis fibrosa and Paget's osteitis deformans are both diseases of cortical bone with fibro-osteoid changes, malacia hyperostoses and giant cell tumor formation.

Familial generalized osteophytosis with tremendous hyperplastic enlargements of the bones of the hands, forearms, feet and lower legs has been described. It is a disease of periosteal bone growth similar to hypertrophic osteoarthropathy, or Bamberger-Marie disease.

TABLE 1.—*Showing Distinctive Features of Some Rare Bone Diseases*

	Distribution		Site of Involvement			Metaphysial Enlargement	Exostoses	Enchondromas	Cystic Changes	Changes in Density	Shortening	Heredity	Additional Features
	Bilateral	Unilateral	Epiphysis	Metaphysis	Shaft								
Chondrodysplasia	+	..	+	+	..	++	++	+	..	..	+	+	
Ollier's disease	..	+	+	+	..	+	+	++	..	..	+	?	
Osteopetrosis	+	..	..	+	+	+	..	..	..	+	..	..	Anemia
Voorhoeve's disease	+	..	..	+	+	+	..	..	..	+	..	..	Longitudinal striation
Osteodystrophia fibrosa	+	..	..	+	+	..	..	..	+	..	..	..	Precocious puberty
Osteodystrophia fibrosa unilateralis	..	+	..	+	+	..	..	..	+	..	..	..	Facial asymmetry
Achondrodysplasia	+	..	+	..	..	..	..	..	..	..	+	+	Globular heads; trident hands
Chondrodystrophia	+	..	+	..	..	..	..	..	..	..	+	+	Kyphosis
Osteochondritis	..	+	+	..	..	..	..	..	..	..	..	..	
Chondro-osteodystrophy	+	..	+	..	..	..	..	..	..	..	+	+	Cloudy cornea; hepatosplenomegaly; mental retardation
Xanthomatosis	+	..	..	..	..	..	..	..	+	..	..	..	Exophthalmos; diabetes insipidus
Osteogenesis imperfecta	+	..	..	+	+	..	..	..	..	+	..	+	Blue sclera; multiple fractures
Osteitis fibrosa	+	..	..	..	+	..	..	..	+	+	..	..	Kyphosis; giant cell tumors
Osteitis deformans	+	..	..	..	+	..	..	..	+	+	..	..	Kyphosis; giant cell tumors
Osteophytosis	+	..	..	+	+	..	..	..	..	..	..	..	Excessive periosteal growth

The distinctive features of these diseases have been tabulated for convenience in table 1.

REPORT OF CASES

The following report places on record a family in which 36 members are known to have shown the lesions characteristic of this disease. They illustrate most of the salient features with regard to its hereditary nature, its age and sex incidence and the clinical, pathologic and roentgenologic changes and prognosis.

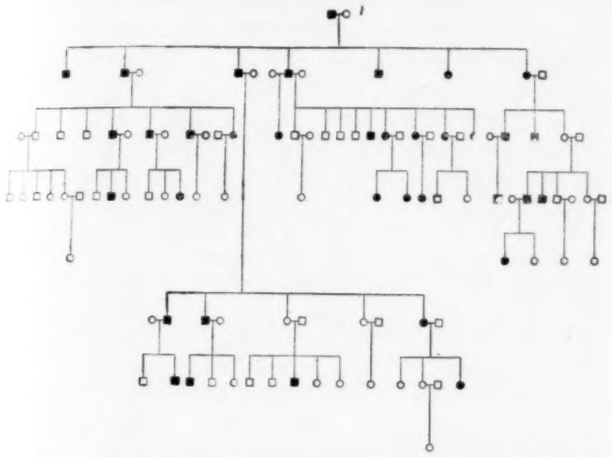
In 1934 an 11 year old boy was brought to the x-ray department of Jefferson Davis Hospital because of a swelling of the upper end of the right humerus. The roentgen examination showed the typical picture of deforming chondrodysplasia. An investigation of other members of the family was instigated. One of the aunts, who proved to be a highly intelligent woman aged 28, became so interested in the condition that she offered to trace its incidence throughout her large, widely scattered family. Her problem was made particularly difficult because members of the family lived in distant localities in Texas and in eleven other states and also because many of the family were sensitive about their abnormalities and sought to conceal them. Eventually she turned over to us the material from which the accompanying genealogy was constructed and brought in 12 of her relatives for examination. Her death, following the removal of a large pedunculated exostosis of the pelvis, terminated our collaboration before the study was complete.

The family is of Scotch-Irish descent. Healthy members are average or above average in height, while affected members tend to be shorter than normal. The family as a whole is above average in intelligence, and many of the affected members hold responsible political and civil positions. They are sensitive about their abnormality and live in fear lest their children inherit it. This apprehension doubtless accounts for the relative infertility of the fourth generation as compared with those preceding. Note that there were 7 children born to the first generation, 25 to the second, 38 to the third and only 6 to the fourth. Cesarean section has been required repeatedly because of dystocia caused by tumors of the pelvis, but infant mortality has not been exceptional. No child has been born with recognizable lesions. As a rule, the tumors appeared about the tenth year. Since several of the last two generations are still under this age it is possible that the condition may develop in some of them later. In 2 it has done so since this survey was begun, as letters from their distressed mothers informed us.

Seven members have consulted various clinics over the country and have had operations for removal of exostoses, but at none of these clinics was the hereditary nature of the disease recognized—an observation of value in interpreting the statement "negative family history" occurring so often in case reports. In one of these cases the excised tumor was reported to have undergone a sarcomatous change. The woman who aided us in compiling these data had an exostosis which was benign but had caused great inconvenience and had continued to grow even after she had passed her thirtieth birthday.

The general health and longevity of the family were not affected except as has already been mentioned, and there were no other hereditary anomalies or diseases noted. However, cancer was exceptionally frequent in the second generation. Of the 7 persons making up this generation 5 are known to have died of cancer, the sixth lost his life in an accident and the fate of the seventh is not known. The parents of this generation were

first cousins, according to the statement of an aged friend of the family. He claimed further that both were affected with bony tumors but we have been unable to confirm that the mother was affected.



Incidence of hereditary deforming chondrodysplasia in one family. White squares indicate normal males, black squares affected males, white circles normal females, black circles affected females.

It would profit us little to enumerate the details of each case or to describe each lesion, since they so closely follow the pattern already described ably and often. Certain factors in the hereditary transmission and sex incidence, however, are worthy of special examination.

HEREDITARY NATURE

It was early recognized that heredity plays an important part in the etiology of this disease. Ehrenfried found a history of familial involvement in 83 per cent of cases. Physicians, however, are apt to be overawed by genetic terms and concepts and are rarely willing to analyze their data. As a result, in the English literature one finds hazy references to a strong hereditary or familial tendency but no definite statement as to its character and significance.

In the genealogy presented here the hereditary nature of the disease is strikingly demonstrated. Thirty-six persons in five generations of a family of 78 members are known to have shown the characteristic bony changes, an incidence of 46 per cent.

A careful study of the chart reveals a number of interesting facts:

1. The family springs from a man who is known to have had the disease and who married a cousin who may have been similarly affected.

2. This union resulted in 7 children, all of whom were affected.

3. The next generation produced both normal and affected children.

4. In later generations all the offspring of normal males were normal, but 2 of the 3 normal females gave birth to affected as well as normal children.

5. The affected males and females produced both normal and affected children in approximately equal proportions.

6. In the affected families, the ratio of normal to affected males was 15 to 18 and of females 15 to 17.

The fact that the disease was transmitted to one half or more of the offspring of the affected families suggests that the transmission was by means of a dominant gene. This assumption is strengthened by the fact that the disease was transmitted to 100 per cent of the offspring of a consanguineous couple of whom the father surely and the mother probably was affected. Further support is found in the failure of normal males to transmit the anomaly to any of their children. The fact that 2 of the normal females did transmit it does not conform to the rule for dominant characters, but it does not invalidate this interpretation, since neither of these women was subjected to an actual examination. It is therefore possible that they had bony lesions which they concealed or which were so slightly developed as to have escaped observation. In the literature we find a number of instances of nonaffected women bearing affected children, but in not a single case was the woman actually examined. More convincing evidence is needed.

SEX INCIDENCE

It has been repeatedly stated that the disease is more common in males than in females by a ratio of about 3 to 1. To test the validity of the observation we have examined the relative proportion of normal and affected males and normal and affected females in families in which all members have been recorded. Table 2 summarizes these data from a number of sources. In making the counts, we considered only the siblings from affected families or subfamilies in which the data were complete and the sex of each member was stated.

There were 455 persons in all, almost exactly one half of whom were affected. Of these, 144 were males and only 86 were females, a ratio of 1.7 to 1. Because there happened to be more males than females in the series, this ratio is a little too high. Since 144 out of 237, or 60 per cent, of all the males were affected and only 86 of 218, or approximately 40 per cent, of females, the corrected ratio is 60 to 40, or 1.5 to 1.

While this is much lower than the ratios previously reported, it is puzzling to understand why there should be even this degree of lessened susceptibility of the female as compared to that of the male. It may be that

TABLE 2.—*Summary of Data from Various Sources Showing the Incidence of the Disease in Siblings of Patients with Hereditary Chrondrodysplasia* *

Source of Data	Total Number of Siblings	Normal Siblings			Affected Siblings		
		Males	Females	Total	Males	Females	Total
Campbell [7]	4	1	1	2	..	2	2
Gorsaline [4]	12	2	5	7	2	3	5
Black, R. A., and Traisman, A. S.: Arch. Pediat. **42**: 530, 1925	8	..	..	..	6	2	8
Maynard, H. A., and Scott, C. R.: J. A. M. A. **76**: 579, 1921	27	6	5	11	10	6	16
Graney [1]	36	9	12	21	8	7	15
Scott, R. B.: Am. J. Dis. Child. **57**: 1075, 1939	10	1	2	3	4	3	7
Mahorner [9]	13	2	2	4	6	3	9
Hale, Kelly: Ann. Surg. **92**: 92, 1930	4	1	1	2	..	2	2
Langenskiöld, F.: Acta chir. Scandinav. **58**: 210, 1925	155	31	36	67	51	37	88
Percy, N. M.: Surg., Gynec. & Obst. **20**: 619, 1915	60	14	23	37	19	4	23
Jacobsen, Wilmot: J. A. M. A. **113**: 121, 1939	61	11	30	41	20	..	20
Vanzant	65	15	15	30	18	17	35
Total	455	98	132	225	144	86	230

* Only families in which the data were complete have been included.

our data are incorrect, since often they were based on hearsay evidence. Leg of mutton sleeves, voluminous skirts and Victorian modesty of yesteryear may have concealed many feminine secrets. Or it may be that the disease tends to be less severe in women than in men and hence more likely to be overlooked. There are a number of reported instances in which lesions were not suspected until roentgen examination disclosed their presence. On the other hand mere femaleness does not guarantee mildness of the manifestation, for the disease can be extremely severe and widespread in females. Perhaps factors other than inheritance influence the development of the lesions, factors which may be more active in males than in females, such as trauma, infections, hormones and vitamin deficiencies.

SOCIOLOGICAL CONSIDERATIONS

The prognosis of the disease is usually favorable for the individual, but what is the prognosis for the race?

Once an abnormality has arisen as a result of a gene mutation, it continues to perpetuate itself indefinitely. In other words, affected members of the family continue to procreate affected children. Since the abnormality is not lethal, there is no biologic reason why it should not be perpetuated through the ages from generation to generation, although natural selection and eugenic birth control may cause the strain to die out. It is also possible that through some mechanism at present not understood the character may lose dominance and so pass on as a recessive character, undetected for generations only to become dominant again at some future time. There is an interesting genealogy cited by Sinnott and Dunn [10] in which the transmission of hereditary rigidity of the fingers was traced in a direct line for more than five hundred years through fourteen generations.

We know that the disease arose originally as a gene mutation, and the question arises Was there only one such mutation? Have all present affected patients descended from one common ancestor or have there been many such mutations giving multiple foci of origin in different countries and among different races? This question is impossible to answer. We know that while mutations occur continually the chance of a given mutation recurring frequently is not great. On the other hand, shifting of populations and intermarriage allow wide dissemination within a few generations. The family reported here in five generations multiplied from 2 persons to 78, who are now scattered over at least twelve states. In a few more generations an infinite number of untraceable connections will have been made. Although the disease has been reported as occurring among many nationalities, including Jews and Negroes, human pedigrees are poorly documented, and it is not inconceivable that all persons with this disease are descendants of a common ancestor who, long ago, suffered a mutation of one of his genes.

SUMMARY

In five generations of a family of 78 members, 36 persons are known to have had hereditary deforming chondrodysplasia. The disease is transmitted as a mendelian dominant.

704 Medical Arts Building.

10. Sinnott, Edmund Ware, and Dunn, Leslie: Principles of Genetics, New York, McGraw-Hill Book Company, 1925.

PSEUDO ARIBOFLAVINOSIS

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Sebrell and Butler [1] in their classic discussion described the criteria for the diagnosis of ariboflavinosis in the human being. Among the signs pointed out by them were certain changes in the mucous membranes of the lips and the skin at the angles of the mouth, which they called a cheilosis. More specifically, there was a maceration in each angle of the mouth, the lips were reddened along the line of closure and the mucosa appeared thin, shiny and denuded. In addition to the lesions on the lips there was also a scaly, greasy desquamation in the nasolabial folds, on the alae nasi in the vestibule of the nose and in a few instances on the ears and eyelids. These lesions disappeared in twenty days or less when the patients were given from 0.025 to 0.075 mg. of riboflavin per kilogram of body weight.

In addition to the cheilosis, Kruse, Sydenstricker, Sebrell and Cleckley [2] have described a specific type of glossitis associated with ariboflavinosis. The tongue is clean, the papillae are flattened or mushroom shaped and the color is purplish red or magenta. In addition, they described ocular lesions consisting of circumcorneal injection and a vascularizing keratitis involving the limbic plexus. To this array of signs and symptoms can be further added the subjective sense of a burning tongue.

The identification of these obvious lesions seemed a comparatively simple procedure. The recognition of ariboflavinosis and its correction seemed assured. However, we have collected a group of 34 cases of a disorder that apparently conformed to this syndrome but contrary to our expectations did not respond to riboflavin therapy. This led to the supposition that we were dealing with an irreversible stage of the syndrome, that the diagnosis was incorrect or that the patients were not absorbing the medication from the gastrointestinal tract. These patients were therefore subjected to further investigation.

A history of the diet was taken. The consumption of milk and milk products was unusually high in this group because of the fact that 32 of the 34 were edentulous and were using artificial dentures. For the same reason the meat consumption was low, but the protein intake was adequate. Slit lamp studies failed to reveal pathologic corneal vascularization in any of these patients. A vitamin B_1 load test [3] resulted in uniformly normal readings.

Other clues for disturbed metabolism that might be directly or indirectly attributable to avitaminosis were sought. This included determinations of blood counts, electrocardiograms and gastric analyses. The results of these examinations were all within normal limits except for a few isolated instances in which the abnormality could be attributed to unrelated factors, such as

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1. Sebrell, W. H., and Butler, R. E.: Riboflavin Deficiency in Man, Pub. Health Rep. **53**: 2282, 1938; **54**: 2121, 1939.

2. Kruse, H. D.; Sydenstricker, V. P.; Sebrell, W. H., and Cleckley, H. M.: Ocular Manifestations of Ariboflavinosis, Pub. Health Rep. **55**: 157, 1940.

3. Pollack, Herbert; Ellenberg, Max, and Dolger, Henry: Clinical Studies on Vitamin B_1 Excretion Determined by the Fermentation Method, Arch. Int. Med. **67**: 793 (April) 1941.

electrocardiographic changes following acute myocardial infarction. The gastric analyses showed free acid in all but 1 patient, who had previously had a gastric resection, although many of the patients were over 50 years of age.

A therapeutic trial with orally administered riboflavin was again made in each case. The minimum dose of the riboflavin was 9 mg. a day, while some patients received as much as 25 mg. a day for several months. Such doses are well above those generally accepted as therapeutically adequate. No clinical responses were observed. To preclude the possibility of malabsorption or destruction in the gastrointestinal tract, 5 patients were given the drug parenterally, 10 mg. of riboflavin [4] three times each week for eight weeks either intravenously or intramuscularly. No objective or subjective improvement in the labial or lingual lesions or burning of the tongue when present was observed. Additional vitamin therapy consisting of large amounts of nicotinic acid, liver (by injection) and yeast tablets was then given, but again there was no demonstrable change in the lesion.

In the light of this lack of response to vitamin therapy, the cases and our studies on them were reviewed. The following pertinent facts appeared to explain the failure of therapy:

1. Although the lesions superficially resembled those described by Sebrell and Butler, closer scrutiny revealed that those at the angles of the mouth were chronic in appearance, heaped up, deeply fissured and granulomatous, with no involvement of the lips. This contrasted with the superficially fissured, moist, angular stomatitis and associated cheilosis of ariboflavinosis.

2. None of these patients had ocular or seborrhealike lesions.

3. These patients were all fairly well advanced in age, 33 being over 40 and 28 over 50. Twenty-six of the 34 patients were females.

4. The lesions showed definite spontaneous remissions and exacerbations.

5. There were no evidences of any other vitamin deficiencies.

6. The usual factors that precipitate a vitamin deficiency were absent.

7. There was no response to intensive riboflavin therapy.

8. Thirty-two of the 34 had upper and lower artificial dentures.

We then sought for local causes of these lesions. The frequency of the presence of dentures appeared to implicate them in the pathogenesis of this syndrome. The presence of impurities in "undercured" vulcanite plates, mechanical factors, such as ill fitting dentures, and specific allergy to the components of the dentures had to be considered.

The impurities in the denture material consist chiefly of unbound sulfur and mercury, as well as an excess of mercury sulfide, resulting from improper vulcanization. Several authors [5] have reported cases of glossodynia and lingual atrophy apparently caused by these impurities. It is our belief that these factors obtain in only a few cases.

More often these lesions, which may be classified as perlèche, arise as a result of improper oral mechanics, in particular an improper, too short vertical dimension. Thus, if the vertical dimension is too small, overclosure results; the upper lip overlaps the lower and produces creases at the corner of the mouth and sagging. In this way a pocket formation takes place at the angle of the lips. An excellent receptacle for saliva is formed, and the warm moist bed can become a medium for secondary fungus growth. These fungi help produce the cutaneous lesion of perlèche The associated glossodynia probably results from direct contact of the tongue with the overlying structure, be it palate or denture The presence of a plate narrows the available space for free movement of the tongue in an upward direction; this space is further diminished by the decreased vertical dimension, and so one can readily visualize the possibility of direct contact between tongue and denture. If the vertical dimension is sufficiently shortened as a result of malocclusion, then such contact may take place in the absence of dentures. These factors would account for the simultaneous therapeutic response of the perlèche and glossodynia. Thus, Costen [6] reported 10 cases of glossodynia associated with malocclusion due to overbite and decreased vertical dimension; the condition in all his cases was cured by treating the underlying defect. Swenson [7] described a case of perlèche associated with malocclusion that was cured by increasing the vertical dimension. As further evidence of the presence of deep creases and sagging is the fact that the lesions are not visible with the mouth closed and come into view only as the mouth is opened wide.

It would appear, then, that the perlèche, and probably the glossitis as well, are due to mechanical factors rather than to the dentures. Ill fitting dentures result in a mechanical defect. Our 2 patients with perlèche who did not have false teeth had mechanical defects to explain the lesions. The first was a woman aged 26 who had malocclusion; the other was a man aged 72 who was completely edentulous except for one tooth in the upper jaw; his upper lip sagged considerably and overlay the lower.

It is more than coincidental that one does not encounter perlèche in patients who can afford better made and properly fitted dentures. For the most part the lesions herein described did not usually occur until some time, often several years, after the dentures had been worn. This is due to the associated bone resorption which is known to occur. To combat this influence, denture fitting should be checked from time to time.

It is fully appreciated that not in all cases of perlèche is the condition due to mechanical causes. Also patients with dentures and malocclusion may have coincidental ariboflavinosis. Nevertheless, the frequency with which the syndrome we have described occurs makes it important to recognize. Thus unnecessary vitamin therapy may be avoided and the proper mechanical corrections instituted. Once there is awareness of this syndrome, the differential diagnosis between it and true ariboflavinosis is easily made.

4. Flavaxin Niphanoid, supplied by Winthrop Chemical Company, Inc.

5. Lain, E. S.: Chemical and Electrolytic Lesions of the Mouth Caused by Artificial Dentures, Arch. Dermat. & Syph. **25**: 21 (Jan.) 1932. Schraff, Joseph: Burning Tongue, Rev. Gastroenterol. **2**: 347 (Dec.) 1935. Lindsay, H. C. L.: Traumatic Glossitis Due to Irritants Contained in Plastic Denture Materials, Urol. & Cutan. Rev. **34**: 169 (March) 1930. Fox, Howard: Burning Tongue, New York State J. Med. **35**: 881 (Sept. 1) 1935.

6. Costen, J. B.: Glossodynia, Arch. Otolaryng. **22**: 554 (Nov.) 1935.

7. Swenson, M. G.: Complete Dentures, St. Louis, C. V. Mosby Company, 1940.

SUMMARY

A syndrome of perlèche often associated with a smooth, burning tongue and resembling ariboflavinosis was observed.

The lesions do not respond to vitamin therapy.

The underlying cause appears to be a mechanical defect, so that there is a shortened vertical dimension with overclosure.

The mechanical defect most often results from ill fitting dentures.

Correction of the malocclusion is the indicated therapy.

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VISUAL RESULTS IN THE TRACHOMA CLINICS OF SOUTHERN ILLINOIS

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The trachoma clinics of southern Illinois were established "to prevent blindness by the control of trachoma in southern Illinois," and it seems fitting at this time to render an account of accomplishments. Consequently, only visual results will be considered in this article.

Every patient's vision was recorded on admission to the clinics and at regular intervals thereafter, both with and without glasses. The best possible vision is utilized for the statistics of this paper. As far as possible, the method of estimating and of recording the vision was kept uniform in the five clinics, and in consequence there was no necessity of recording the statistics from each clinic separately. All cases here dealt with have been under observation for a minimum of two years, those in table 1 from 1938 to 1940 and those in table 2 from 1936 to 1938. The former group were treated with sulfanilamide exclusively; the latter group received no sulfanilamide but underwent the local treatment that was employed in the clinic (massage with chaulmoogra oil, expression, silver nitrate, mercuric oxycyanide and all the other means deemed necessary in individual cases). Only stage 1 and stage 2 are included in this study, and consequently this paper deals with the results obtained in the treatment only of acute trachoma.

TABLE 1.—*Patients Treated with Sulfanilamide: Stages 1 and 2 Only*

	Vision on Admission to Clinic						
	20/20	20/30-20/50 Inclusive	20/70-20/100 Inclusive	20/200	Less Than 20/200	Total	Percentage
Number of eyes	94	118	51	24	41	328	....
Vision remained unchanged	88	42	7	10	14	161	....
Vision improved to							
20/20	..	42	11	3	1	57	....
20/30	..	21	5	1	5	32	....
20/40	..	6	9	1	1	17	....
20/50	..	..	9	3	2	14	....
20/70	..	..	7	5	1	13	....
20/100	..	..	..	1	9	10	....
20/200	..	..	..	..	8	8	....
Vision decreased to							
20/30	6	..	..	..	..	6	....
20/40	..	..	..	..	..	0	....
20/50	..	..	..	..	..	0	....
20/70	..	3	..	..	..	3	....
20/100	..	2	..	..	..	2	....
20/200	..	..	3	..	..	3	....
Less than 20/200	..	2	..	..	..	2	0.6
End result							
Vision unchanged	88	42	7	10	14	161	49.1
Vision improved	0	69	41	14	27	151	46.1
Vision decreased	6	7	3	0	0	16	4.8

TABLE 2.—*Patients Treated by Other Means Than Sulfanilamide: Stages 1 and 2 Only*

	Vision on Admission to Clinic						
	20/20	20/30-20/50 Inclusive	20/70-20/100 Inclusive	20/200	Less Than 20/200	Total	Percentage
Number of eyes	279	142	30	15	27	493	....
Vision remained unchanged	250	43	9	7	16	325	....
Vision improved to							
20/20	..	72	3	2	..	77	....
20/30	..	8	4	..	2	14	....
20/40	..	1	1	1	1	4	....
20/50	..	..	5	1	2	8	....
20/70	..	..	3	2	..	5	....
20/100	..	..	..	2	4	6	....
20/200	..	..	..	2	2	2	....
Vision decreased to							
20/30	21	..	..	..	..	21	....
20/40	3	3	..	..	..	6	....
20/50	2	4	..	..	..	6	....
20/70	2	7	..	..	..	9	....
20/100	..	2	2	..	..	4	....
20/200	..	2	..	..	..	2	....
Less than 20/200	1	..	3	..	..	4	0.8
End result							
Vision unchanged	250	48	9	7	16	325	65.9
Vision improved	0	81	16	8	11	116	23.8
Vision decreased	29	18	5	0	0	52	10.3

COMMENT

The tables are self explanatory and need but little discussion. Attention should be called to the fact that in group 2 the percentage of patients who showed improvement of vision was only about one half that of group 1 (those treated with sulfanilamide), while the percentage of patients who lost vision was more than double that of group 1. Even more important is the fact that in both groups the number of eyes that became industrially blind (using the American Medical Association's definition of industrial blindness as being vision of less than 20/200) was less than 1 per cent.

SUMMARY

Acute trachoma (stage 1 and stage 2) can be treated so successfully that less than 1 per cent of the eyes infected will become industrially blind.

From the final visual standpoint, systemic treatment with sulfanilamide is preferable to purely local treatment because (*a*) twice as many eyes show definite improvement in vision and (*b*) less than half as many eyes show positive losses in vision.

58 East Washington Street.

The Nurses in the Trachoma Clinics of Southern Illinois performed the tedious work of collecting the statistics here used.

Storage of Carbohydrate in the Body.—When carbohydrate is absorbed in larger quantity than is required to meet the body's immediate needs for fuel, the surplus normally accumulates as glycogen, which is stored in the liver and the muscles. The amount of carbohydrate which will be stored in the entire body after rest and liberal feeding is estimated at 300 to 400 grams. Thus the total amount of carbohydrate which can be stored as such in the body is no more than is frequently taken in one day's food. When the body has no tendency to increase its store of glycogen, the further surplus of carbohydrates tends to be converted into fat.—Sherman, Henry C.: Chemistry of Food and Nutrition, New York, Macmillan Company, 1941.

Clinical Notes, Suggestions and New Instruments

RENAL HEMODYNAMICS IN ORTHOSTATIC HYPOTENSION

EFFECTS OF ANGIOTONIN AND HEAD-UP BED

A. C. CORCORAN, M.D.; J. S. BROWNING, M.D., AND IRVINE H. PAGE, M.D., INDIANAPOLIS

Our purpose in the present report is to describe observations on the effects of postural changes and angiotonin injections on arterial pressure, pulse rate and renal hemodynamics in a patient who suffered from orthostatic hypotension and who was effectively treated by the head-up bed described by MacLean and Allen.[1] Briefly stated, before treatment the patient responded to a tilt of 60 degrees by syncope, decreased arterial pressure and renal blood flow. Injection of angiotonin greatly increased the blood pressure and renal blood flow. This effect of angiotonin contrasts sharply with the renal ischemia which accompanies its pressor action in normotensive subjects. After two months' treatment with the head-up bed a tilt to 60 degrees did not cause syncope, and renal blood flow was increased in spite of a transient decrease of arterial pressure. The injection of angiotonin at this time resulted in its characteristic pressor and renal vasoconstrictor effects.

The patient, a Negro woman aged 40, developed orthostatic hypotension during prolonged convalescence from pneumonia. Syncope, hypotension and tachycardia developed immediately on her assuming the erect posture. She had therefore been confined to bed and wheelchair for some two months before the first observation (March 15, 1941; *A*, 1 to 7 in the table). She was then directed to sleep in a bed whose head was raised at an angle of about 40 degrees to the floor. During the following weeks the onset of syncope on standing became progressively delayed. At the time of the second observation (May 17; *B*, 1 to 6 in the table) standing with occasional movement, as in light housework, was tolerated without symptoms. Arterial pressure dropped sharply to levels of about 70 mm. of mercury systolic and 55 mm. diastolic on first standing but was restored to or above the level observed in the prone position within two to four minutes.

METHODS

Effective renal blood flow was calculated from plasma diodrast clearance and the hematocrit ratio, the glomerular filtration rate from inulin clearance and the filtration fraction from the inulin/diodrast clearance ratio. The postural changes were made on a tilt table.

RESULTS

Before Treatment.—Renal blood flow, which was subnormal in the prone position, decreased, as did arterial pressure, when the patient was tilted to 40 and 60 degrees from the horizontal. The intense renal ischemia and hypotension recorded in the table in observation *A* 4 were associated with pallor and early syncope. Intravenous injection of angiotonin resulted in greatly increased arterial pressure, provoked the complaint of severe pulsation within the head and increased renal blood flow. Some part of this apparent increase of renal flow may possibly arise from a washing out of tubular fluid formed but not excreted during the preceding period of depressed filtration rate and oliguria. Intraglomerular pressure, as expressed in filtration fraction, was increased during the hypotensive phases at a 40 and at a 60 degree tilt. The injection of angiotonin decreased filtration fraction to a level slightly lower than was observed with the patient in the prone position. The pressor effect of the injection receded during eleven minutes. Some residue of protection apparently remained during the ensuing eighteen minutes of observation at a 60 and at a 40 degree tilt.

After Treatment.—Tilting to 60 degrees after two months' adaptation to the erect posture by the head-up bed resulted in transient drop of blood pressure and lasting increase of renal blood flow, the net renal change being not dissimilar to that observed during the action of angiotonin before treatment. Intravenous administration of angiotonin at this time caused slight precordial oppression, increased arterial pressure and decreased renal blood flow without significant change in filtration fraction over twelve minutes of pressor action. Renal blood flow and diastolic pressure remained somewhat elevated during the following ten minutes at a 60 degree tilt. Both values were restored to control levels when the patient assumed the prone position.

COMMENT

Our observations on the effects of treatment of orthostatic hypotension with the head-up bed of MacLean and Allen[1] extend and confirm their conclusions as to its value in restoring toward normal cardiovascular responsiveness to the erect posture. The increase of filtration fraction during tilting before treatment expresses an increase of intraglomerular pressure which is more probably the result of afferent arteriolar vasodilatation than of efferent vasoconstriction, since orthostatic hypotension is usually due to decreased vasoconstrictor responsiveness.[2] Such deficiency of normal vasoconstrictor response is suggested by the paradoxic effect of angiotonin in increasing renal blood flow and decreasing filtration fraction. Angiotonin, the effector agent of the renal pressor system,[3] normally excites renal efferent arteriolar vasoconstriction sufficiently to cause renal ischemia and to increase filtration fraction during its pressor action.[4] During the hypotensive phase before and the pressor state after injection of angiotonin, the normal lack of relation between blood pressure and renal blood flow was not maintained. It therefore appears that in this type of orthostatic hypotension normal autonomy of the renal circulation[5] is lost.

Effect of Posture and Angiotonin on Effective Renal Blood Flow, Filtration Rate, Inulin Clearance Filtration Fraction, Blood Pressure and Pulse Rate in Orthostatic Hypotension before (A) and after (B) Treatment by the Head-Up Bed

Observation	Renal Blood Flow, Cc. per Min.	Inulin Clearance, Cc. per Min.	Filtration Fraction	Blood Pressure *	Pulse Rate *	Minutes	Periods †	Posture, Degree of Tilt
A 1	376	53.5	0.218	124/ 85	98	27	3	0
2	334	51.4	0.236	95/ 75	120	26	3	40
3	131	20.3	0.238	75/ 62	120	8.75	1	60
4	40	6.35	0.245	66/ 53	120	10.75	1	60
				2 Cc. Angiotonin Injected Intravenously				
5	681	87.5	0.198	177/114	100	10.75	1	60
6	315	51	0.25	125/ 87	96	9.75	1	60
7	275	42.7	0.24	111/ 85	100	9.00	1	40
				Two Months' Treatment with Head-Up Bed				
B 1	475	55.1	0.178	124/ 72	90	37.5	3	0
2	1,060	144	0.205	75/ 60	98	4.0	1	60
3	757	81.1	0.164	124/ 83	106	31.5	3	60
				2 Cc. Angiotonin Intravenously				
4	495	55.5	0.17	169/109	100	11.75	1	60
5	603	71.7	0.18	126/ 92	100	9.5	1	60
6	474	44.6	0.19	122/ 80	94	17.75	2	0

* The values of blood pressure and pulse are averages of consecutive readings during the time of observation indicated under minutes and do not represent the widest changes observed in any observation.

† By period is indicated the number of collections of urine represented in the corresponding data.

Miss Ellen Bowers, R.N., assisted in making these observations.

From the Lilly Laboratory for Clinical Research, Indianapolis City Hospital.

1. MacLean, A. R., and Allen, E. V.: Orthostatic Hypotension and Orthostatic Tachychardia: Treatment with the "Head-Up" Bed, J. A. M. A. **115**: 2162 (Dec. 21) 1940.

2. Jeffers, W. A.; Montgomery, H., and Burton, A. C.: Types of Orthostatic Hypotension and Their Treatment, Am J. M. Sc. **202**: 1, 1941.

3. Page, I. H., and Helmer, O. M.: A Crystalline Pressor Substance (Angiotonin) Resulting from the Reaction Between Renin and Renin Activator, J. Exper. Med. **71**: 29, 1940.

4. Corcoran, A. C., and Page, I. H.: The Effects of Angiotonin on Renal Blood Flow and Glomerular Filtration, Am. J. Physiol. **130**: 335, 1940. Corcorcan, A. C.; Kohlstaedt, K. G., and Page, I. H.: Changes of Arterial Blood Pressure and Renal Hemodynamics by Injection of Angiotonin in Human Beings, Proc. Soc. Exper. Biol. & Med. **46**: 244, 1941. Herrick, J. F.; Corcoran, A. C., and Essex, H. E.: The Effects of Renin and Angiotonin on the Renal Blood Flow and Blood Pressure of the Dog, Am. J. Physiol. **135**: 88, 1941.

5. Smith, H. W.: Physiology of Renal Circulation, Harvey Lectures, Baltimore, 1940-1941.

Restoration toward normal of vasoconstrictor responsiveness is indicated in the renal ischemia which followed injection of angiotonin during tilting after treatment, although the absence of change in filtration fraction at this time suggests a residual relative lack of efferent vasoconstriction.

The similarity between the effect of angiotonin before treatment and the response to tilting after treatment suggests that a physiologic function of the renal vasopressor system (renin, renin activator, angiotonin) may be sought in vascular adaptation to the erect posture and its shifts of arterial pressure and that failure of the renal pressor system may participate in some measure in the genesis of orthostatic hypotension. This view is supported by the observation that excessive release of renal pressor substance in experimental hypertension may occur in the absence of renal ischemia [6] as the result of decreased intrarenal pulsation.[7] Such a decrease of intrarenal pulsation may follow the decrease of pulse pressure which occurs on standing.

SUMMARY

Effective renal blood flow and arterial pressure decrease during the syncope of orthostatic hypotension. Injection of angiotonin at this time increases renal blood flow and blood pressure and relieves syncope. After treatment with the head-up bed, assumption of the erect posture results in only transient decrease of blood pressure and increased renal blood flow, with restoration of the fall in renal blood flow which normally accompanies the pressor effect of angiotonin.

Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT. HOWARD A. CARTER, Secretary.

HEIDBRINK BASSINET, KREISELMAN MODEL 20A (INFANT RESUSCITATOR), ACCEPTABLE

Manufacturer: The Ohio Chemical & Mfg. Company, 1177 Marquette Street, Cleveland.

The Heidbrink Bassinet, Kreiselman Model 20A, is designed for treatment of premature infants or all infants requiring administration of continuous flow oxygen. The apparatus provides for resuscitation, inhalation and aspiration. Mounted on a heavy two post stand with large casters, the unit includes an operative head with automat, manometer and flowmeter, two yoke automatic regulator for D or E size gas tanks, electrically warmed bassinet with large drawer, perforated tray adjustable up and down at both ends, mattress, electrically operated aspirator, infant size inhalation inhaler, infant size catheter adapter and intratracheal catheter tubings, handwheel wrench. The motor is of explosion proof design. Shipping weight is 175 pounds. The apparatus operates on alternating current. Only positive pressure is provided. There is no negative pressure developed at the face piece.

Temperature in the bassinet is automatically controlled by a thermostat; a thumb screw adjustment permits manual selection of temperatures ranging from 80 to 110 F. Relative humidity as high as 50 per cent, and higher is obtained by adjusting the valve of the humidifier attached to the under side of the bassinet. According to the firm, an infant may be maintained in the Heidbrink Bassinet under safe and proper conditions of warmth, humidity and oxygen rich atmosphere for indefinite periods of time.

Oxygen flow is regulated by a needle valve and is indicated on a dry float kinetic type flowmeter calibrated up to 16 liters per minute. The humidified oxygen is delivered directly into the head hood suspended over one end of the bassinet. This arrangement is said to confine the oxygen rich atmosphere within a small area and to give the patient immediate benefits of any change in dosage or humidity. Openings in the top of the head hood provide for the admission of normal air should the oxygen flow be interrupted or the supply exhausted.

For resuscitation, the automat is adjusted to deliver the selected positive pressure considered safe, and the safety escape valve of the water manometer is set. The water manometer is filled by pouring distilled water into the cup of the escape valve until the water rises in the manometer gage glass to the 0 calibration.

When the positive pressure is set according to directions recommended by the firm, the soft latex resuscitation inhaler is placed over the infant's face, the breathing tube extending over the tongue into the pharynx, with the chin held up. The lever on the resuscitation inhaler is depressed and held down for several seconds, or long enough for the lungs to be inflated plus a second or two. The lever is then released and the lungs deflate because of their own elasticity.

When breathing has been established but oxygen is still needed, the resuscitation inhaler with attached airway is removed, the continuous flow inhaler is placed over the nose and mouth and the flowmeter is set at 4 liters per minute by adjusting the needle valve marked "Oxygen On-Off."

The aspirator motor switch is located on the side of the bassinet, and vacuum is controlled by the thumbscrew adjacent to the vacuum gage on the pump. The oil cup must be filled with high grade medium heavy (S. A. E. 30) oil. A metal cup attached to the left side of the pump catches any drippings of oil from the pump.

Two switches at the foot end of the bassinet operate the light bulbs used for warming purposes. Each switch controls two bulbs. The mattress in the bassinet may be adjusted to various degrees of Trendelenburg posture.

In the Council's clinical examination of the unit, it was found to give satisfactory clinical service in each of its functions as a resuscitator, aspirator, incubator and for administration of continuous flow oxygen. The delivery room personnel of the hospital where the investigation was conducted made some objection to the apparatus in that it appeared unduly large and cumbersome. However, this objection may be considered unjustified because several necessary pieces of delivery room equipment have been successfully combined in one unit.

The Council voted to accept the Heidbrink Bassinet, Kreiselman Model 20A, for inclusion on its list of accepted devices.

6. Corcoran, A. C., and Page, I. H.: Renal Blood Flow in Experimental Renal Hypertension, Am. J. Physiol. **135**: 361, 1941-1942.

7. Kohlstaedt, K. G., and Page, I. H.: The Liberation of Renin by Perfusion of Kidneys Following Reduction of Pulse Pressure, J. Exper. Med. **72**: 201 (Dec. 21) 1940.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

AUSTIN E. SMITH, M.D., Acting Secretary.

SULFADIAZINE SODIUM.—The sodium salt of 2-sulfanilamidopyrimidine.—$C_{10}H_9N_4O_2S\ Na$ (M. W. 272.26).

Actions and Uses.—The monohydrate sodium salt of sulfadiazine has the same therapeutic properties as does sulfadiazine. At the present time its use can be recommended only in pneumococcic, streptococcic, meningococcic, Escherichia coli and Friedländer's bacillus infections.

Solutions of sulfadiazine sodium in distilled water are strongly alkaline and have a p_H ranging from 9 to 10. When a 5 per cent solution of this drug is injected intravenously, the sodium ion is promptly split off, leaving sulfadiazine. Thus, in the final analysis, the sodium salt of sulfadiazine represents a method of introducing the poorly soluble sulfadiazine intravenously. The drug, being alkaline, is definitely irritating to the tissues and hence should never be given except by the intravenous route. If it is given by the subcutaneous, intramuscular, intrathecal or any other parenteral route, necrosis and sloughing of the tissues may take place.

The administration of 5 per cent solutions of sulfadiazine sodium by the intravenous route is indicated in moderately severe and severe pneumococcic infections in which it is desired to obtain promptly adequate blood concentrations of sulfadiazine,

in patients who by reason of vomiting are not obtaining proper concentrations of the drug when it is given by mouth; in patients in whom the absorption of the drug is poor so that adequate concentrations of sulfadiazine cannot be obtained; and, finally, in patients who have undergone surgical procedures on the upper gastrointestinal tract and in whom the administration of the drug by mouth is contraindicated. With the exception of patients who are vomiting, or in surgical cases, it is rarely necessary to use intravenous injections of solutions of sulfadiazine sodium more than once or twice. Frequent and repeated injections of the drug are generally not advisable because such injections tend to produce thrombosis of the veins.

Dosage.—The intravenous injection of 0.01 Gm. per kilogram of body weight of the sodium salt of sulfadiazine will produce quickly a concentration of approximately 1 mg. of sulfadiazine per hundred cubic centimeters of blood. The initial dose of the drug for patients severely ill with pneumococcic infections is based on 0.10 Gm. per kilogram of body weight, this to be followed immediately, and every four hours thereafter, by 1 Gm. of sulfadiazine by mouth. If it does not seem advisable to use oral therapy with sulfadiazine, doses based on 0.03 to 0.05 Gm. per kilogram of body weight of sodium sulfadiazine may be administered by the intravenous route at twelve hour intervals. Such doses will maintain the concentration of the drug at between 10 and 15 mg. per hundred cubic centimeters.

In preparing solutions of sodium sulfadiazine the drug is weighed out and is then dissolved in sufficient sterile distilled water to make a 5 per cent solution. This should not be sterilized by boiling or autoclaving because the sodium salt is unstable under such conditions. The sodium salt of sulfadiazine should not be dissolved in sterile isotonic solutions of sodium chloride, dextrose or any other types of solutions which are used parenterally. Solutions of this drug should be administered only intravenously and at the rate of 5 cc. per minute. Solutions of sulfadiazine sodium should always be given separately and in different containers from other parenteral fluids. In other words, solutions of the drug should not be poured into containers which have been used for other parenteral solutions. It should never be poured into a transfusion bottle either preceding, during or just after a blood transfusion. When the sodium salt of sulfadiazine is being used, frequent determinations of the concentration of the drug in the blood should be made by the method described by Bratton and Marshall (*J. Biol. Chem.* **128**:537 [May] 1939).

Tests and Standards.—

Sulfadiazine sodium is a white, odorless powder, having a bitter taste. It is very soluble in water, soluble in alcohol and insoluble in ether or chloroform. Aqueous solutions may absorb sufficient carbon dioxide to cause precipitation of sulfadiazine. Sulfadiazine sodium is not hygroscopic at 25 C. if the relative humidity does not exceed 50 per cent.

Acidify an aqueous solution of sulfadiazine sodium with acetic acid, filter, wash the residue with distilled water and dry at 100 C. The dried precipitate meets the tests for identity given under Sulfadiazine-N. N. R.

Sulfadiazine sodium meets the requirements for chloride, sulfate, heavy metals and moisture content given under Sulfadiazine-N. N. R.

Incinerate 0.2 Gm. of sulfadiazine sodium with the addition of 0.5 cc. of concentrated sulfuric acid. Ignite until the carbon residue has been burned off, add 0.5 cc. of concentrated sulfuric acid, heat gently to drive off the excess acid and ignite to constant weight at 600 C.: the sodium content calculated from the weight of sodium sulfate residue is not less than 8.2 nor more than 8.6 per cent. The nitrogen content of dried sulfadiazine sodium is not less than 20.3 nor more than 20.7 per cent.

Dissolve about 0.5 Gm. of sulfadiazine sodium in 10 cc. of distilled water and 10 cc. of concentrated hydrochloric acid contained in a 400 cc. beaker, dilute to 50 cc., cool to 15 C., and titrate with tenth-molar sodium nitrite solution.

The endpoint is the first immediate blue streak obtained when a glass rod dipped into the solution is drawn across a smear of starch-iodide paste on white filter paper (or a clear glass plate). The solution should retain this endpoint for thirty seconds. Each cubic centimeter of tenth-molar sodium nitrite corresponds to 0.02723 Gm. of anhydrous sulfadiazine sodium: the amount of sulfadiazine sodium found corresponds to not less than 99.0 per cent nor more than 101.0 per cent, calculated on the dried basis.

LEDERLE LABORATORIES, INC., PEARL RIVER, N. Y.

Patent applied for.

Sulfadiazine Sodium *(Powder)*: 5 Gm. bottle.

MENADIONE (See THE JOURNAL, Jan. 17, 1942, p. 226).

The following dosage forms have been accepted:

THE LAKESIDE LABORATORIES, INC., MILWAUKEE.

Ampules Menadione (in oil) 1 mg. and 2 mg.: 1 cc. Each cubic centimeter contains menadione dissolved in sesame oil containing 0.5 per cent chlorobutanol.

Capsules Menadione (in corn oil): 2 mg.

LACTATE RINGER'S SOLUTION (See THE JOURNAL, Jan. 17, 1942, p. 226).

The following dosage forms have been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Lactate Ringer's Solution: 500 cc. and 1,000 cc. bottles. Each hundred cubic centimeters contains sodium lactate 0.31 Gm., sodium chloride U. S. P. 0.6 Gm., potassium chloride N. F. 0.03 Gm. and calcium chloride U. S. P. 0.02 Gm.

THE UPJOHN COMPANY, KALAMAZOO, MICH.

Lactate Ringer's Solution in Upjohn Infusion Bottles: 500 cc., 1,000 cc., and 2,000 cc. Each hundred cubic centimeters contains sodium lactate 0.31 Gm., sodium chloride 0.6 Gm., potassium chloride 0.04 Gm. and calcium chloride 0.02 Gm. in redistilled water.

DEXTROSE (See New and Nonofficial Remedies, 1941, p. 179).

The following dosage forms have been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Dextrose 10% W/V in Lactate Ringer's Solution: 500 cc. and 1,000 cc. bottles. Each hundred cubic centimeters contains dextrose U. S. P. 10 Gm., sodium lactate 0.31 Gm., sodium chloride U. S. P. 0.6 Gm., potassium chloride N. F. 0.03 Gm. and calcium chloride U. S. P. 0.02 Gm.

DON BAXTER, INC., GLENDALE, CALIF.

Dextrose 5% W/V in Lactate Ringer's Solution: 500 cc. and 1,000 cc. Vacoliter containers. Each hundred cubic centimeters contains dextrose 5.0 Gm., sodium lactate 0.31 Gm., sodium chloride 0.6 Gm., potassium chloride 0.03 Gm. and calcium chloride 0.02 Gm.

Dextrose 10% W/V in Lactate Ringer's Solution: 500 cc. and 1,000 cc. Vacoliter containers. Each hundred cubic centimeters contains dextrose 10.0 Gm., sodium lactate 0.31 Gm., sodium chloride 0.6 Gm., potassium chloride 0.03 Gm. and calcium chloride 0.02 Gm.

THE UPJOHN COMPANY, KALAMAZOO, MICH.

Dextrose 5% W/V in Lactate Ringer's Solution in Upjohn Infusion Bottles: 500 cc., 1,000 cc. and 2,000 cc. Each hundred cubic centimeters contains dextrose U. S. P. 5.0 Gm., sodium lactate 0.31 Gm., sodium chloride 0.6 Gm., potassium chloride 0.03 Gm. and calcium chloride 0.02 Gm.

Dextrose 10% W/V in Lactate Ringer's Solution in Upjohn Infusion Bottles: 500 cc., 1,000 cc. and 2,000 cc. Each hundred cubic centimeters contains dextrose U. S. P. 10 Gm., sodium lactate 0.31 Gm., sodium chloride 0.6 Gm., potassium chloride 0.03 Gm. and calcium chloride 0.02 Gm.

CALCIUM GLUCONATE (See New and Nonofficial Remedies, 1941, p. 176).

The following dosage form has been accepted:

THE LAKESIDE LABORATORIES, INC., MILWAUKEE.

Ampul Solution of Calcium Gluconate 10% W/V Stabilized with Calcium d-Saccharate 0.5% W/V: 10 cc. Each ampul contains a sterile distilled water solution of calcium gluconate U. S. P. 1.0 Gm., stabilized with calcium d-saccharate 0.05 Gm. (For tests and standards of calcium d-saccharate see THE JOURNAL, April 4, 1942, p. 1216.)

SERUMS AND VACCINES, DIAGNOSTIC AGENTS (See New and Nonofficial Remedies, 1941, p. 481).

TRICHINELLA EXTRACT.—Trichinella extract is diluted saline extraction of clean Trichinella larvae prepared by artificial digestion of muscles of heavily infested experimental animals. The extract is adjusted to neutrality and sterilized by filtration.

Actions and Uses.—Trichinella extract is used for making the intradermal diagnostic skin test in the diagnosis of trichinosis. An immediate or delayed type of positive reaction may result from the intradermal injection of 0.1 cc. of the diluted antigen, depending on the duration of the illness.

ELI LILLY & COMPANY, INDIANAPOLIS.

Trichinella Extract: Marketed in packages of two 1 cc. vials; one vial of Trichinella Extract, 1:10,000 dilution in isotonic solution of sodium chloride; and one control vial of isotonic solution of sodium chloride used as extracting fluid. Both extract and control solution contain Merthiolate (Sodium Ethyl Mercuri Thiosalicylate, Lilly), 1:20,000, as a preservative.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JULY 4, 1942

INTRAPERITONEAL ADMINISTRATION OF SULFANILAMIDE

Animal experiments of Key and Burford, Jensen, Johnsrud and Nelson, Key and Frankel have demonstrated that local application of sulfonamide drugs does not interfere with the healing of bones, muscles, connective tissue, joints, pleura and peritoneum. Introduction of sulfonamide drugs into the normal peritoneal cavity of mice (Throckmorton) caused a gradual increase of mononuclear phagocytes of the type elicited by only the mildest of irritants. Rae found, in his studies on experimental peritonitis in rabbits, that sulfanilamide is most effective in the preperitonitis stage. Rosenburg and Wall concluded from their experiments on rats that sulfanilamide is not irritating to the peritoneum and apparently is not harmful to the human body. Pearl and Ricketts, by intraperitoneal use of sulfathiazole, controlled peritonitis produced in the rat by inoculation of a pure culture of hemolytic Escherichia coli. In the experiments of Harbison and Key, local application of sulfanilamide did not appreciably delay the healing or decrease the tensile strength of a wound or tend to cause peritoneal adhesions.

Organisms commonly cultured from the peritoneum in perforative appendicitis are Escherichia coli, hemolytic and nonhemolytic streptococci and occasionally Clostridium perfringens, against all of which the drugs of the sulfonamide group are effective. Ravdin, Rhoads and Lockwood [1] reduced the mortality rate of 1.5 per cent in a series of 880 consecutive cases of acute appendicitis to that of 0.4 per cent in a series of 257 cases by instituting sulfanilamide therapy of cases in which there was spreading peritonitis. The drug was administered hypodermically in an 0.8 per cent concentration in isotonic solution of sodium chloride.

Dees [2] was probably the first to use sulfanilamide powder intraperitoneally. He treated 25 cases of varying degrees of peritonitis by pouring 20 Gm. of sulfanilamide into the area of infection at the time of operation. Cyanosis and jaundice were observed in a few instances but cleared rapidly. Only one death occurred. Griswold and Antoncic [3] treated 111 cases of perforated peptic ulcer. From 5 to 10 Gm. of sulfanilamide crystals was sprinkled about the lesions, and 3 to 5 Gm. was implanted in the abdominal wall. In this series were twenty fatalities. Thompson, Brabson and Walker [4] treated 59 cases of acute, diffuse appendical peritonitis by placing 8 Gm. of sulfanilamide into the peritoneal cavity and 4 Gm. in the layers of the abdominal wall. In cases of appendical abscess they considered it safe to use as much as 20 Gm. total of the drug. Among these 59 cases some seemed hopeless. From 1935 to 1939 741 cases of acute suppurative appendicitis were treated at the Roosevelt Hospital, New York City, with twenty deaths, a mortality rate of 2.7 per cent. During 1940 with intraperitoneal sulfanilamide therapy there were 204 consecutive cases in which operations were performed without a fatality. The dramatic reduction in mortality rate in 1940, the authors felt, was directly due to sulfanilamide. Kinney [5] operated in 45 cases of generalized peritonitis with only one death. Some of the cases were of the gravest type. Toxic effects were not noted. The improvement in the results, the author felt, was due to the use of sulfanilamide in the peritoneal cavity. A local concentration of from seventy-five to one hundred times higher than systemic concentrations may be obtained by direct application of sulfanilamide at the source of infection, according to Mueller and Thompson.[6] They placed 10 Gm. of the drug in the peritoneal cavity and sprinkled 5 Gm. in the layers of the abdominal wall. This, they believe, increased the rapidity of wound healing in cases of purulent infection. For young children and infants a dose of 3 to 4 Gm. is suggested. The dose may be calculated on the basis of 175 mg. per kilogram of body weight. Absorption of the drug from the peritoneal cavity is rapid and reaches its peak in from ten to eighteen hours, averaging 7 mg. per hundred cubic centimeters of blood. Samples of peritoneal fluid exhibited levels of from 300 to 800 mg. per hundred cubic centimeters for more than forty hours postoperatively. Such a degree of concentration cannot be obtained by any other form of administration of the drug and is probably the active factor in controlling the infection. Mortality rate for 742 surgical cases of acute appendicitis between 1935

1. Ravdin, I. S.; Rhoads, J. E., and Lockwood, J. S.: The Use of Sulfanilamide in the Treatment of Peritonitis Associated with Appendicitis, Ann. Surg. **111**: 53 (Jan.) 1940.

2. Dees, J. Gordon: A Valuable Adjunct in Perforated Appendixes, Mississippi Doctor **18**: 215 (Sept.) 1940.

3. Griswold, R. Arnold, and Antoncic, Rudolph F.: Perforated Peptic Ulcer, Ann. Surg. **113**: 791 (May) 1941.

4. Thompson, James E.; Brabson, John A., and Walker, John M.: The Intra-Abdominal Application of Sulfanilamide in Acute Appendicitis, Surg., Gynec. & Obst. **72**: 722 (April) 1941.

5. Kinney, C. A.: The Use of Powdered Sulfanilamide in the Peritoneum (Report of 45 Cases), J. South Carolina M. A. **37**: 137 (June) 1941.

6. Mueller, R. Sterling, and Thompson, James E.: The Local Use of Sulfanilamide in the Treatment of Peritoneal Infections, J. A. M. A. **118**: 189 (Jan. 17) 1942.

and 1939 at the Roosevelt Hospital amounted to 2.83 per cent. With sulfanilamide since January 1940 there have been 400 consecutive surgical cases of acute appendicitis at the Roosevelt Hospital without a death. Jackson and Coller [7] emphasize that sulfanilamide applied locally in the peritoneal cavity is most effective in the invasive stage of infection. It is far less effective in the presence of frank suppuration for, as Lockwood has demonstrated, its action is inhibited by peptones. They therefore feel that its use is particularly indicated when open anastomoses have been made, when there has been accidental soiling of the peritoneum, and when a walled off abscess has been broken into and the remainder of the abdomen exposed to contamination. Absorption of the drug from relatively normal peritoneal cavities was so rapid as to raise a doubt as to the analogy of its action here and in other parts of the body. In man 5 Gm. intraperitoneally gave a concentration of almost 10 mg. per hundred cubic centimeters in about two hours, and at twenty-four hours levels below 2 mg. per hundred cubic centimeters were found. However, in the presence of an infection the absorption is much slower. Sixty-two patients received sulfanilamide intraperitoneally and 29 of these were given the drug intravenously or orally for one or more days. There were three fatalities which the authors felt might have been avoided if sulfanilamide had been continued. None of the patients receiving only the intraperitoneal dose of the drug showed any toxic signs. Among the 29 patients who received additional sulfanilamide, jaundice developed in 9. Administration of the drug was stopped and jaundice disappeared. Hepatitis has often been observed in the course of sulfanilamide therapy. The question arose whether the intraperitoneal application of the drug might be more apt to lead to hepatitis than administration by other routes. Jackson and Coller found in experiments on dogs that the concentration of the drug in the portal vein was forty times greater than in the jugular vein. There may be a special affinity of the liver for the drug. The peritoneal administration of the drug offers the fastest method of raising the concentration in the blood to effective levels. To avoid damage to the liver the authors suggest that an interval of eighteen hours or more should elapse before giving sulfanilamide after the initial 5 mg. peritoneally. Tashiro and his associates [8] stress the necessity of thorough cleansing and aspiration of pus and infectious material from the abdomen in order to remove the inhibiting substances (peptones). Crystalline sulfanilamide in amounts of 4 to 10 Gm., depending on the patient's age, was implanted at the area of greatest infection, with 2 or 3 Gm. used to coat the wound layers and the surface before closure. Since the adoption of this therapy, the authors have closed most of the suppurating cases without drains, securing primary wound healing and a smooth postoperative convalescence. There was no depreciation in leukocytosis and no toxic manifestations. There was no fatality in 18 cases of ruptured appendix with peritonitis treated in this manner. In the experience of Hudson and Smith,[9] intravenous and intramuscular chemotherapy gave disappointing results in many cases of spreading peritonitis, the fatality rate reaching the figure of 55.5 per cent. Since the adoption of intraperitoneal sulfanilamide therapy as a routine procedure in similar cases, the mortality has been reduced to 8.3 per cent. Jaundice was not observed in their series of 125 cases. The consensus is clearly that intraperitoneal sulfanilamide is an extremely valuable weapon in the treatment of potential or established peritonitis.

7. Jackson, Howard C., and Coller, Frederick A.: The Use of Sulfanilamide in the Peritoneum: Experimental and Clinical Observations, J. A. M. A. **118:** 194 (Jan. 17) 1942.

8. Tashiro, K.; Pratt, O. B.; Kobayashi, N., and Kawaichi, G. K.: The Local Implantation of Sulfanilamide in the Peritoneal Cavity and Its Clinical Application in Peritonitis, Surgery **11:** 671 (May) 1942.

INSECT BORNE VACCINE

A new epidemiologic approach is suggested in recent attempts by Hammon and his associates [1] of the Hooper Foundation, University of California, to reproduce the natural mode of infection of horses with St. Louis encephalitis virus. A widespread infection of horses and other animals of the Pacific Coast with St. Louis encephalitis is apparent from numerous serologic surveys. Titrations of 69 horse bloods from western states, for example, showed 49 (70 per cent) of the bloods containing antibodies of sufficiently high titer to neutralize the St. Louis virus in vitro. Cox and his co-workers [2] had previously found that horses without such antibodies developed typical encephalomyelitis on intracerebral injection of the St. Louis virus, while antibody containing horses were immune to such injection. Horses convalescent from the experimental intracerebral inoculation invariably developed relatively high titer specific antibodies against the virus. During the terminal phase of experimental disease the virus was occasionally isolated from nasal washings but was never demonstrated in the circulating blood. Contact with nasal secretions, therefore, was the only method of spread of this disease suggested by the earlier investigators.

A different method of spread, however, was indicated by the repeated isolation [3] of the St. Louis virus from one species of mosquitoes (Culex tarsalis) of the Yakima Valley, Washington, all other biting insects of this region being negative. This strongly suggests

9. Hudson, Rupert Vaughan, and Smith, Rodney: Intraperitoneal Sulfanilamide: Its Prophylactic and Therapeutic Value, Lancet **1:** 437 (April 11) 1942.

1. Hammon, W. M.; Carle, B. H., and Izumi, E. M.: Proc. Soc. Exper. Biol. & Med. **49:** 335 (March) 1942.

2. Cox, H. R.; Philip, C. B., and Kilpatrick, J. W.: Pub. Health Rep. **56:** 1391 (July 4) 1941.

3. Hammon, W. M.; Reeves, W. C.; Brookman, B.; Izumi, E. M., and Gjullin, C. M.: Science **94:** 328 (Oct. 3) 1941.

that culex transmission is the main factor in bringing about the wide dissemination of the virus among wild and domestic animals of western states.

To test this possibility a number of wild, unbroken colts were imported from an uninhabited mountainous region of Nevada, an area statistically free from the St. Louis virus. The serums of these horses were free from homologous antibodies at the time of their importation. St. Louis virus isolated from Yakima mosquitoes was used for the inoculation tests and employed in its first and second mouse brain passage. Each brain was emulsified in ten volumes of broth containing 5 per cent of sheep serum. Certain horses were given 3 cc. of the resulting virus suspension intranasally. Others were inoculated subcutaneously (very superficially) with 3 cc. of a 1:10,000 dilution of the same suspension, the dose being planned to approximate a possible single mosquito inoculation. Control horses were inoculated intracerebrally with the suspension, with a number of uninoculated controls kept in a separate corral.

Bleedings were begun with all horses twelve hours after the inoculation and continued twice daily for fifteen days. Nasal washings were made once daily. Virus was not isolated from the nasal washings of any horse; neither was elevation of temperature or other sign of illness noted in any horse. In a typical case of a horse inoculated subcutaneously, the St. Louis virus was isolated from the circulating blood twenty-six, thirty-six and forty-eight hours after inoculation, after which the blood became sterile. By the end of twenty-two days all inoculated animals had developed high titer antiserums. The Hooper Institute bacteriologists believe that their subcutaneous test represents the essential features of the usual method of spread of this disease, a symptomless, "inapparent" or subclinical infection due to an insect carrier, an infective concentration of the virus being present in the blood stream during the first forty-eight hours, permitting infection of other blood sucking insect vectors. In none of their experiments did the mosquito borne virus manifest sufficient neurotropic tendencies to produce clinical symptoms of encephalitis, although it did produce typical encephalitis on intracerebral inoculation into mice.

If this work is adequately confirmed, it would seem reasonable to conclude that the wide dissemination of antibodies in wild and domestic animals of the Pacific Coast is due to an insect borne subneurotropic virus producing a subclinical septicemia. The insect borne virus would then function as a specific vaccine, immunizing the animal population against clinical types of the disease. Whether or not the St. Louis virus is modified in its virulence or specificity by insect passage has not yet been determined.

Current Comment

DISTURBANCE OF CARBOHYDRATE METABOLISM AS AN ETIOLOGIC FACTOR IN SCHIZOPHRENIA

Meduna and his associates[1] at Loyola University School of Medicine tested the assumption that one of the accompaniments of schizophrenia may be a disturbance of the carbohydrate metabolism acting antagonistically to the normal carbohydrate metabolism. Investigation of the diabetogenic action of the anterior lobe of the hypophysis has established that there is no change in the hormone concerned with carbohydrate metabolism of the blood serum of schizophrenic patients. In fasting schizophrenic patients the same hypophysial deficiency is apparent as in starving normal persons. The Tannhauser and Pfitzer test when applied to 20 schizophrenic patients indicated a disturbance in the carbohydrate metabolism characterized by a delayed utilization of blood sugar. This delay, the authors believe, is due to overactivity of some product of endocrine origin which inhibits the effect of insulin normally produced. The quantitative relation of this hypothetic substance to 35 Gm. of dextrose injected is measured by the prolongation of the period of hyperglycemia. This time is fifteen minutes for normal persons, while for the schizophrenic it increases twofold to eightfold. Blood from normal subjects, when injected intraperitoneally into a rabbit in amounts of 20 cc., did not protect the animal against the effect of injected insulin. The blood sugar curve obtained from rabbits injected with blood from schizophrenic patients and with insulin was distinctly different. This curve differed from the average curve for rabbits which received blood from normal persons in two respects: 1. The greatest loss of blood sugar indicated by the average curve for animals receiving blood from schizophrenic subjects was 52.8 per cent, and that indicated by the curve for animals receiving blood from normal subjects was 65.7 per cent. 2. The recovery of the curve for animals which received blood from schizophrenic patients begins at the second hour and proceeds continuously at an increasing rate. The recovery curve for animals which received blood from normal subjects is sluggish; the difference between the second and the third hour is 0.8 per cent, between the third and fourth hour 4.1 per cent, and between the fourth and fifth hour 4.3 per cent, so that in the fifth hour the average loss is still 56.5 per cent as compared with the 25.6 per cent loss of blood sugar for the group which received blood from schizophrenic patients. The differences in the mean values for the schizophrenic group are as follows: between the second and third hour 4.9 per cent, between the third and fourth hour 9.5 per cent and between the fourth and fifth hour 12.8 per cent. These experiments seem to indicate that schizophrenic patients generally have more anti-insulin factor in their blood than do

1. Meduna, L. J.; Gerty, F. J., and Ursc, V. G.: Biochemical Disturbances in Mental Disorders: I. Anti-Insulin Effect of Blood in Cases of Schizophrenia, Arch. Neurol. & Psychiat. **47**: 38 (Jan.) 1942.

normal persons. There appears to be a "characteristic schizophrenic curve." In cross experiments the authors have demonstrated that the same rabbit reacted in a characteristic manner to the injection of blood from a normal and to the injection of blood from a schizophrenic person. The presence of an anti-insulin factor in the blood of the schizophrenic was likewise demonstrated in experiments in vitro. The authors found that a schizophrenic pattern in about 60 per cent of their cases was characterized by the presence of the anti-insulin factor, while a similar clinical pattern in about 40 per cent of the cases was not accompanied by the presence of an anti-insulin factor. The blood sugar curve of experimental animals might then be used as a diagnostic test for schizophrenia accompanied by the presence of an anti-insulin factor. The presence of this factor which acts antagonistically to normal carbohydrate metabolism may be one of the etiologic factors in schizophrenia. A subdivision of schizophrenia into two pathogenically different forms is thus made possible. Certainly these observations offer opportunity for a scientific approach to several unsolved problems in schizophrenia.

AVOIDANCE OF CONSTIPATION THROUGH DRINKING OF WATER

Constipation is a clinical term—loosely used—denoting a state of the bowels in which evacuations are infrequent and difficult or the volume of the stools is insufficient. Evacuation of feces is the function of the left half of the colon. A number of clinical, mechanical and reflex (gastrocolic) factors are recognized as contributing to its proper function. The amount of water ingested daily is probably not a factor of any great importance in the maintenance of this function. Consumed water is absorbed principally in the right half of the colon. Insufficient fluid intake would result in a drier fecal current to the left colon. However, the dry, hard stool of the patient with constipation is due to the long overtime which the feces spend in the colon rather than to insufficient fluid intake. A certain amount of water is of course essential for body needs. From clinical experience it would not be possible to state definitely that insufficient water intake is a factor in constipation, and still less that adequate or excessive amounts have any prophylactic or curative value.

Brown [1] stresses the fact that many people, especially women, will drink only 2 or 3 glasses of water a day. The water intake for a person who suffers from constipation, he believes, should be about 2 liters. Adson and Bargen [2] advise between 2.5 and 3 liters of liquids daily. A search of the literature for experimental studies on the subject reveals a cursory reference by Bastedo,[3] in which it is told that a number of "non-digestive" patients were made to drink 1 glass of water every hour for fifteen hours daily (almost a gallon) for one week. This regimen did not increase the bowel movements and served merely to activate the kidneys. The majority of clinicians recommend from 8 to 10 glasses of water a day for persons with constipation. Excessive amounts may be helpful in some cases. The available data do not justify the opinion that excessive amounts of ingested water may be considered a factor in avoiding constipation. The mode of living, habits, diet and emotional responses are probably the determining factors in the causation of constipation.

1. Brown, P. W.: Constipation, M. Clin. North America **21**: 691 (May) 1937.
2. Adson, Alfred W., and Bargen, J. Arnold: Constipation Attributable to Enlarged Atonic Colon, Controlled by Splanchnic and Upper Lumbar Sympathectomy, Tr. West. S. A. for 1936, p. 186.
3. Bastedo, W. E.: Chronic Constipation, M. Clin. North America **20**: 891 (Nov.) 1936.

U. S. FINDS "FINGER SURGEON" FRAUD IN INCOME TAX

Curtis H. Muncie, a somewhat glorified osteopath who has in the past received much publicity for his deafness "cure," including some items in THE JOURNAL, has pleaded guilty to five counts charging income tax fraud. The maximum penalty for each count is five years in prison and $10,000 fine. Actually he is said to have evaded, from 1932 to 1936, $159,280 in taxes, in connection with a reported income during that period of $502,681. This information appears in an item in the New York *Times* for June 16, 1942. Muncie's first extensive publicity was obtained because of a trip to Europe, supposedly for the purpose of curing a congenital deafness of the second son of the king of Spain. On returning to this country, Muncie denied that he had treated this individual, Prince Don Jaime, and declared that he had undertaken the trip to Europe for the purpose of treating another prince, and that he had done so successfully. The attention of the public was called to this matter in 1926 in an article in *Hygeia*.[1] Investigation at that time proved that Prince Don Jaime was still deaf and had undergone no such treatment. Previously, in the *Journal of the American Osteopathic Association,* Muncie had claimed 100 per cent success in the prevention of deafness and permanent improvement in 100 per cent and cures in 95 per cent of what he called first degree catarrhal deafness. In second degree catarrhal deafness he claimed improvement in 95 per cent and cures in 80 per cent. Muncie referred to his procedure as "operative constructive finger surgery," which he administered under anesthesia, and claimed that the patient "comes back from a pleasant sleep with a reconstructed nasal and nasopharyngeal area." According to the *Hygeia* article, the examination charge was $25 and the operation itself $200 and up, with postoperative treatments, two a week for six months, at $10 each. Previously THE JOURNAL had called the attention [2] of the medical profession to this alleged miracle man and noted that both osteopaths and chiropractors had claimed him. If the report of Muncie's income in the New York *Times* is accurate and represents returns from his practice, Muncie may well rank among the leading charlatans of our time—Abrams, Baker, Brinkley and Locke. Law making agencies which have clamped down on the promotion of "patent medicines" that are harmful to the public might at the same time find ways to reach the exploiters of pseudomedicine and bizarre technics.

1. Cramp, Arthur J.: Deafness Cure Quackery and Pseudo-Medicine, Hygeia **4**: 21 (Jan.) 1926.
2. Curing Prince Don Jaime's Deafness Again, Current Comment, J. A. M. A. **81**: 481 (Aug. 11) 1923.

MEDICINE AND THE WAR

In this section of The Journal each week will appear official notices by the Committee on Medical Preparedness of the American Medical Association, announcements by the Surgeon Generals of the Army, Navy and Public Health Service, and other governmental agencies dealing with medicine and the war, and such other information and announcements as will be useful to the medical profession.

PROCUREMENT AND ASSIGNMENT SERVICE FOR PHYSICIANS, DENTISTS AND VETERINARIANS

RESTATEMENT OF DUTIES OF THE VARIOUS UNITS OF THE PROCUREMENT AND ASSIGNMENT SERVICE

The development of the Procurement and Assignment Service program makes a reappraisal of the duties of the units seem desirable at this time:

DIRECTING BOARD

1. Establishment of policies and procedures for the Procurement and Assignment Service.

2. Maintenance of liaison with the appropriate governmental officials and agencies and with the various professional groups.

CENTRAL OFFICE

1. Maintenance of contacts with federal agencies relative to their needs for physicians, dentists and veterinarians, and consultations with these agencies regarding the possibilities of revision of their requests in consideration of the limited supply of professional men in these fields.

2. Preparation of quotas of the minimum medical, dental and veterinarian services which should be retained for the civilian population, including private practice, hospital service, industrial service, public health service and medical education.

3. Preparation of quotas for allocating to the states the requests for physicians, dentists and veterinarians needed for war service, these quotas to be determined on the basis of the physician-population ratio in the state, the number of physicians already in service from that state, and so on.

4. Maintenance of rosters of physicians, dentists and veterinarians: (*a*) total in the United States, (*b*) those who have registered with the Procurement and Assignment Service, (*c*) these rosters to contain physician's age, qualifications, location and the like. From these rosters, which will be maintained by the National Roster, names of physicians, dentists and veterinarians with certain qualifications will be obtained from time to time.

5. Secure information for the various governmental agencies in regard to physicians, dentists and veterinarians, as to (*a*) availability for service other than in their present location, (*b*) their professional and other qualifications, (*c*) their willingness to serve in various capacities during the war emergency.

6. On the basis of this information, select the names of those physicians who meet the specifications of the requisitioning agency.

7. Cooperate with the various governmental agencies in obtaining the applications of those physicians thus selected for service.

CHICAGO OFFICE

1. Maintain and keep up to date the confidential information concerning all physicians, dentists and veterinarians with respect to character, type of practice, infringements of law, and so on, which must be considered by the Army, Navy or other service in deciding whether individuals are qualified for commission.

2. Maintain confidential lists of the relative standing of all specialists. These lists have been developed through the facilities of the American Medical Association, the American Specialty Boards, the National Research Council and confidential advisers representative of the various specialties. This material is to be used by the requisitioning agencies as a basis for assignment of those now on duty and those who are candidates for commission.

3. Assistance of a consultative and advisory nature to the directing board and to the various committees of the Procurement and Assignment Service. This includes the utilization of statistical data collected over a period of many years by the medical, dental and veterinary medical associations.

CORPS AREA COMMITTEES

1. To supervise the work of the state committees in order that they may be reasonably uniform in the manner in which they carry out the policies of the directing board. This will require meetings of the corps area committees with state chairmen and visits by the corps area chairman to the states within his corps area.

2. To act as appeal board in cases in which the individual physician, dentist or veterinarian, his community or his employing agency differs with the classification given by the state procurement and assignment committee.

STATE COMMITTEES

1. To obtain the overall enrolment of the professions in the state. This will require the maintenance of rosters in the state offices of those who have enrolled with the Procurement and Assignment Service and those who have not. The former lists will be obtained from the central office.

2. Survey local needs for professional services in conformity with the policies laid down by the directing board. On the basis of these surveys determine how many physicians, dentists or veterinarians are needed in the various communities of the states to care for the civilian needs and how many can be released for service elsewhere.

3. Determine which particular individual physicians, dentists or veterinarians can be considered "available" for service elsewhere. In view of the changing circumstances, this will require constant reappraisal and obviously can be done only locally.

4. Pass on the availability, character and professional qualifications of individual physicians who are being considered for appointment for service elsewhere, e. g. for commissions in the Army or Navy.

5. Cooperate with the state offices of the Selective Service System in determining whether physicians, dentists and veterinarians who are subject to classification by Selective Service are essential in their local communities.

6. Maintenance of lists to be transmitted from the central office of those who have expressed their preference for service in industrial practice, civil practice in other communities, state and local health departments and institutions, and to act as liaison between these individuals and the industrial organizations, civil practitioners, health departments and institutions desiring the services of these individuals in a temporary capacity for the duration of the war.

7. Keeping the directing board informed of conditions in the state, and bringing to the attention of it matters which may involve general policies.

8. Periodic (weekly) reports to the central office of the names and addresses of those commissioned from the state with information as to which of these have been serving as interns or residents.

DISTRICT OR COUNTY COMMITTEES

1. To provide information, assistance and advice to the state committees in carrying out their functions. Local committees have no authority to make final decisions as to whether positions or individuals are essential or nonessential.

By Order of the Directing Board:

SAM F. SEELEY, M.D., Executive Officer.

OPPOSITION TO SEGREGATION OF BLOODS FROM WHITE AND NEGRO DONORS IN BLOOD BANKS

The Committee on Race Relations of the American Association of Physical Anthropologists, which includes

DR. WILLIAM K. GREGORY, curator, Department of Comparative Anatomy, American Museum of Natural History, and president of the American Association of Physical Anthropologists;
DR. HARRY L. SHAPIRO, assistant curator, Department of Physical Anthropology, American Museum of Natural History;
DR. FRANZ WEIDENREICH, formerly of Peking Union Medical School, Peiping, China, and now working at the American Museum of Natural History;
DR. W. W. GREULICH, professor of physical anthropology and anatomy, Western Reserve University Medical School, and director of the Brush Foundation, Chairman,

is opposed to the segregation of the bloods from white and Negro donors in the blood banks which are being collected under the auspices of the American Red Cross. The committee's reasons for opposing it are the following:

1. There is no evidence that the blood of Negroes differs in any significant respect from that of white persons. The successful transfusion with whole blood from white persons to Negroes or vice versa can be accomplished quite as readily as between members of the same race. The same blood groups occur among both white persons and Negroes, and no difference has been demonstrated between white and Negro bloods of the same groups.

In the form of dried serum or plasma in which the blood currently collected is being stored, even differences in blood group between donor and recipient are of no consequence.

2. One objection to the indiscriminate use of Negro blood in the blood bank is the somewhat higher incidence of syphilis among Negroes and the erroneous notion that the disease can be transmitted by means of dried blood of a syphilitic donor to a nonsyphilitic recipient.

(*a*) Every blood sample received is tested for evidence of syphilis and all samples found to react positively are rejected.

(*b*) Procedures used in preparing and preserving the dried blood plasma or serum would kill any syphilitic organism in the blood even if, as might conceivably happen, the blood of a syphilitic donor was inadvertently included in the blood bank.

3. The segregation of the blood of white persons from the blood of Negroes in the blood bank is therefore not only unscientific but is a grievous affront to the largest minority group in our country. This policy of the American Red Cross appears even more indefensible when one considers the origins of some of the substances which are widely and effectively used in modern medical practice and which are readily accepted by the patient.

(*a*) The use of materials obtained from the blood of horses, rabbits and other animals for protecting against or combating various diseases, such as diphtheria and pneumonia.

(*b*) Many of the estrogenic (female sex hormone) and gonadotropic preparations currently used in therapy are obtained from the urine of stallions and from the urine or blood serum of pregnant mares. Their efficacy is in no way impaired by their rather inauspicious origin.

(*c*) The use of extracts or concentrates of various animal organs in the treatment of certain human diseases has been accepted gratefully and with much benefit by those afflicted with such diseases as pernicious anemia, hypothyroidism, diabetes mellitus and Addison's disease.

In view of these facts, it seems highly improbable that any soldier or civilian so seriously wounded as to require a blood or plasma transfusion will insist that it come from a donor whose skin is no darker than his own.

It is interesting in this connection to recall that the practice of using colored women as wetnurses was at least formerly quite widespread among the better circumstanced families in the Southern part of this country. It is quite certain that along with the nutritious elements in the milk of those colored women, the white infants ingested many of the same substances which were circulating in the blood stream of the women who suckled them. It is most unlikely that it did them any harm.

SOLDIERS MARCH TO SAVE GASOLINE

In the transfer from Camp Lee to Camp Pickett of thousands of medical department soldiers comprising the Medical Replacement Center, the three day movement was made on foot rather than by trucks, according to the New York *Times,* primarily to conserve tires and gasoline, of which it is estimated 300,000 tire miles and 5,000 gallons of gasoline were saved. Although authorized to transfer the troops by trucks, Brig. Gen. William R. Dear, M. C., commanding the Medical Replacement Center, used the opportunity to provide the troops with experience in camp and other phases of field training. The center is now at Camp Pickett in what was described as one of the newest and most modern camps in the country.

FLIGHT SURGEONS' ASSISTANTS

Six courses for flight surgeons' assistants are conducted annually at the School of Aviation Medicine, Randolph Field, Texas. These men are trained as specialists and assistants to flight surgeons in the selection, care and maintenance of the flier. A class of sixty-three flight surgeons' assistants completed the six weeks course on June 16. Colonel Eugen G. Reinartz, M. C., U. S. Army, commandant of the school, addressed the class, and the certificates were presented by Major Merrill J. Reeh, M. C.

INSTRUCTION IN MEDICAL ASPECTS OF CHEMICAL WARFARE

A program is being established to instruct thousands of physicians in New York to diagnose and treat persons suffering from poison gas in case of gas attacks by the enemy. Dr. David D. Rutstein, who has been appointed consultant on the medical aspects of chemical warfare for the medical division for the Office of Civilian Defense, will initiate the program. Dr. Rutstein, who is on leave as chief of the cardiac bureau of the New York State Health Department, completed the course in chemical warfare given at the University of Cincinnati (THE JOURNAL, June 27, p. 717) under the sponsorship of the office of Civilian Defense. In April a course was completed also by two faculty members from each of the medical schools in New York, and classes which include the chiefs of local emergency medical service squads throughout New York are now being organized.

The classes at the medical schools, which will be given to about two hundred and forty-five physicians, will comprise a total of six hours' instruction. The next phase of the program will be the instruction of four thousand members of emergency medical service squads; then similar instruction will be given to the remaining practicing physicians in the state. It is expected that at least the first aid aspects of the treatment of cases of

gas poisoning will filter on down to the air raid wardens and the auxiliary firemen and policemen.

As soon as this program has been set up in New York, Dr. Rutstein will establish similar programs of instruction for all physicians on the eastern seaboard and along the gulf coast.

BUNDLES FOR BRITAIN

At a national meeting of Bundles for Britain, Inc., in New York on June 10 the financial statement presented showed a total of $6,546,153 received between its foundation on Dec. 17, 1939 and May 29, 1942. This total included cash received, revenues from entertainments and profits from the sale of merchandise donated and from contributed articles. Of this total $802,696, or 12 per cent, was spent for administrative purposes, benefits, collections, warehousing, promotion, shipping and publicity.

Steps were taken to create an emergency fund by regular contributions from all branches, to be used to answer without delay the frequent cable requests from London for immediate relief funds.

The president of Bundles for Britain, Inc., is Mrs. Robert W. Bingham; the vice presidents are Mrs. Charles Dana Gibson, Mrs. Andrew Carnegie, Mrs. Eliot Tuckerman and Colonel William Chadbourne; the secretary is Mrs. R. Alger Sawyer. On the advisory committee are Mrs. Marshall Field, Mrs. A. I. du Pont and Alfred E. Smith. After the meeting the delegates inspected the warehouses and workrooms and in the evening attended a dinner meeting which was addressed, among others, by the wife of the British ambassador, Viscountess Halifax, and Sir Gerald Campbell, the British minister.

CIVILIAN DEFENSE

Dr. Fred W. Rankin, Lexington, Ky., president of the American Medical Association, has retired as a member of the advisory board of the Office of Civilian Defense on being called to active duty in the Surgeon General's Office of the Army and has been succeeded on that board by Dr. John T. O'Rourke, dean of the University of Louisville School of Dentistry.

Dr. Victor H. Vogel, passed assistant surgeon of the U. S. Public Health Service, has joined the staff of the Medical Division of the Office of Civilian Defense. Dr. Vogel has been with the U. S. Public Health Service since 1931 and has served with the Division of Mental Hygiene since 1935.

Dr. Dean A. Clark, surgeon, U. S. Public Health Service, reserve, New York City, has been appointed head of a hospital section organized in the Medical Division of the Office of Civilian Defense, and head of a new emergency medical section in the U. S. Public Health Service, which will administer the program jointly with the Medical Division of the Office of Civilian Defense. Since 1939 Dr. Clark has been on the staff of the Division of Public Health Methods, National Institute of Health, of the U. S. Public Health Service.

Mr. Carl E. Schwob of Chicago has been appointed sanitary engineer, U. S. Public Health Service, reserve, and assigned to the Office of Civilian Defense. Mr. Schwob graduated in civil engineering from the State University of Iowa and took a master of science degree in sanitary engineering at Harvard Graduate School of Engineering. He was on the staff of the Illinois State Department of Health from 1926 to 1937 and from 1938 to 1941. In 1939 he was lent by the state health department to the State Department of Welfare of Illinois as assistant managing officer at the Manteno State Hospital in charge of typhoid control during and following a serious epidemic at that hospital.

The first showing of the sound slide film on the operation of the Emergency Medical Service of the Office of Civilian Defense was made at the annual meeting of the American Medical Association at Atlantic City, June 8-12 (THE JOURNAL, June 13, p. 569).

Dr. E. Howe Miller has been appointed director of the medical detachment in the civilian defense program of Danville, Va.

Mr. H. N. Hooper, superintendent of the Cincinnati General Hospital, has been granted a leave of absence for the duration of the war to accept a position as hospital administrator in the Office of Civilian Defense.

Dr. Gilbert S. Osingcup, Orlando, Fla., who has been commissioned in the U. S. Public Health Service, reserve, has been visiting defense councils in Florida in connection with the Office of Civilian Defense.

Dr. Sylvester D. Craig, Winston-Salem, has been named director of the North Carolina emergency medical service.

FIRST AID TRAINING IN GARY STEEL MILLS

At the mills of the Carnegie-Illinois Steel Corporation in Gary, Ind., a round the clock program of first aid training has been set up which already has been completed by nearly seven hundred employees who have taken the twenty-hour standard Red Cross course in first aid. The schedule for the classes at these mills is arranged so that employees of all three shifts may participate. The classes are conducted by twenty instructors who have Red Cross first aid certificates and are under the direction of Dr. D. E. Griffiths, chief medical officer of the emergency defense organization of this plant. One of the instructors was sent to Texas to receive special training in combating the effects of chemical and demolition bombs. The pupils who make the best records in the first aid courses are selected for the stretcher teams, each being assigned to a definite station in the plant in case of emergency and each team composed of a captain and eight assistants. Others who have completed the course will be stationed in case of emergency at the four first aid and two dressing stations in the plant. Among those who have already completed their first aid course are one hundred ten girls, some of whom are expected to continue further training to qualify as nurses' assistants.

COMMITTEE ON BACTERIOLOGY

The Society of American Bacteriologists has appointed a war committee on bacteriology with Dr. Thomas M. Rivers, New York, as chairman; other members are Robert E. Buchanan, Ph.D., Ames, Iowa; Edwin J. Cameron, Ph.D., Washington, D. C.; Edwin B. Fred, Ph.D., Madison, Wis., and Dr. N. Paul Hudson, Columbus, Ohio; Selman A. Waksman, Ph.D., New Brunswick, N. J., president of the society, and William B. Sarles, Ph.D., Madison, Wis., secretary-treasurer, are ex officio members. The committee aims to serve as a clearing house for research in the fields of medical, industrial and agricultural bacteriology and general microbiology, to coordinate the activities of various interested groups and to act in an advisory capacity to them. It will aid in the placement of bacteriologists with positions concerned with defense.

CORNELL HOSPITAL UNIT CALLED TO ACTIVE DUTY

The New York Hospital and Cornell Medical College Hospital unit has been called to active military service. At the 171st charter day meeting of the Society of the New York Hospital, June 18, the acting president, Langdon P. Marvin, read a message from President Roosevelt, whose great-great-grandfather Isaac Roosevelt was one of the founders. Among the speakers at the charter day meeting was Major General Frank R. McCoy, U. S. Army retired, president of the Foreign Policy Association.

BLOOD BANKS IN WEST VIRGINIA

Since the U. S. Public Health Service will not make funds immediately available to establish blood banks in cities more than 300 milles from the coast line, which excludes Wheeling, Huntington and Charleston, the three West Virginia cities will establish blood banks on "a voluntary basis," the state health commissioner, Dr. Clifton F. McClintic announced, according to the Charleston *Mail* of May 15.

ORGANIZATION SECTION

PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE NINETY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD IN ATLANTIC CITY, JUNE 8-12, 1942

MINUTES OF THE SECTIONS

SECTION ON PRACTICE OF MEDICINE

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. Roy W. Scott, Cleveland.

Drs. Elaine P. Ralli and Saul H. Rubin, New York, presented a paper on "The Effect of Heat and Heat Fractions on the Fatty Liver of Depancreatized and Pancreatic Duct Ligated Dogs." Discussed by Dr. M. Lawrence Montgomery, San Francisco.

Drs. James A. Greene and G. F. Keohen, Iowa City, presented a paper on "Insulin Resistance Due to Infection in Diabetes Mellitus in Man." Discussed by Dr. Howard F. Root, Boston.

Dr. Joseph H. Pratt, Boston, read the Frank Billings Lecture on "Advances in the Diagnosis and Treatment of Pancreatic Disease." Dr. Pratt was introduced by the chairman, who gave a brief historical review of the Frank Billings Lecture.

Drs. Joseph T. Beardwood Jr. and George P. Rouse Jr., Philadelphia, presented a paper on "Effects of Estrogenic Substances in the Treatment of Diabetes." Discussed by Drs. Herman O. Mosenthal, New York; Charles W. Dunn, Philadelphia; Howard F. Root, Boston, and Carlos A. P. Lamar, Miami, Fla.

Dr. Russell S. Boles, Philadelphia, read a paper entitled "Observations on the Prevention and Management of Peptic Ulcer." Discussed by Drs. Sara M. Jordan, Boston; Frank H. Lahey, Boston, and Hyman I. Goldstein, Camden, N. J.

THURSDAY, JUNE 11—AFTERNOON

The following officers were elected: chairman, Dr. Burrell Raulston, Los Angeles; vice chairman, Dr. Charles Wolferth, Philadelphia; secretary, Dr. William D. Stroud, Philadelphia; delegate, Dr. Fred M. Smith, Iowa City; alternate, Dr. Roy W. Scott, Cleveland; executive committee, Dr. Fred M. Smith, Iowa City; Dr. Roy W. Scott, Cleveland, and Dr. Burrell Raulston, Los Angeles; member of the American Board of Internal Medicine, Dr. John Musser, New Orleans.

Drs. Harrison F. Flippin, Leon Schwartz and Albert H. Domm, Philadelphia, presented a paper on "Modern Treatment of Pneumococcic Pneumonia." Discussed by Drs. Adolph S. Rumreich, Chicago, and Worth B. Daniels, Fort Bragg, N. C.

Dr. Roy W. Scott, Cleveland, read the chairman's address entitled "Arterial Hypertension."

Drs. W. D. Sutliff, Milton Helpern and Gerard P. J. Griffin, New York, presented a paper on "Sulfonamide Toxicity as a Cause of Death in New York City in 1941." Discussed by Drs. Perrin H. Long, Baltimore, and Russell L. Cecil, New York.

Dr. Edward Weiss, Philadelphia, read a paper on "Psychosomatic Aspects of Hypertension." Discussed by Dr. Roy W. Scott, Cleveland.

Drs. Frank S. Dolley and Lyman A. Brewer, Los Angeles, presented a paper on "Intrathoracic Tumors: Diagnosis and Treatment." Discussed by Dr. Roy W. Scott, Cleveland.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Experimental Medicine and Therapeutics. The proceedings are reported in the minutes of that section.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Arthur W. Allen, Boston.

Dr. Edgar J. Poth, Baltimore, read a paper on "Succinyl Sulfathiazole as an Adjuvant in Surgery of the Large Bowel." Discussed by Drs. John S. Lockwood, Wynnewood, Pa.; H. C. Saltzstein, Detroit, and Edgar J. Poth, Baltimore.

Dr. Frank H. Lahey, Boston, read a paper on "Lesions of the Right Colon Involving Right Colectomy."

Dr. Harvey S. Stone and Dr. Samuel McLanahan, Baltimore, presented a paper on "Resection and Immediate Anastomosis for Carcinoma of the Colon."

These two papers were discussed by Drs. C. W. Mayo, Rochester, Minn.; Henry W. Cave, New York; Arthur W. Allen, Boston; Frank H. Lahey, Boston, and Harvey B. Stone, Baltimore.

Dr. Thomas E. Jones, Cleveland, read a paper on "Complications of the Combined Abdominoperineal Operation Based on Over Five Hundred Cases." Discussed by Drs. Frederick A. Coller, Ann Arbor, Mich.; E. Parker Hayden, Boston, and Garnet W. Ault, Washington, D. C.

Dr. Charles B. Puestow, Chicago, read a paper on "Experimental and Clinical Studies of Intestinal Motility and Postoperative Distention." Discussed by Dr. Robert J. Crawley, Detroit.

Dr. I. S. Ravdin, Philadelphia, read a paper on "The Prevention of Liver Damage and the Facilitation of Repair in the Liver by Diet." Discussed by Dr. Walter E. Lee, Philadelphia.

THURSDAY, JUNE 11—MORNING

Dr. J. Ross Veal, Washington, D. C., read a paper on "The Prevention of Pulmonary Complications Following Thigh Amputations by High Ligation of the Femoral Vein."

Dr. W. J. Potts, Oak Park, Ill., read a paper on "Pulmonary Embolism: A Clinical and Experimental Study."

These two papers were discussed by Drs. Geza de Takats, Chicago; Edgar V. Allen, Rochester, Minn.; L. W. Grossman, New York; J. Ross Veal, Washington, D. C., and W. J. Potts, Oak Park, Ill.

Dr. Arthur W. Allen, Boston, read the chairman's address, entitled "Subtotal Gastrectomy for Stenosing Duodenal Ulcer."

Drs. Harry E. Mock and Harry E. Mock Jr., Chicago, presented a paper on "Management of Skull Fractures and Brain Injuries." Discussed by Drs. Max M. Peet, Ann Arbor, Mich.; Fred M. Douglass, Toledo, Ohio; A. S. Leven, Chicago; F. M. Summerville, Oil City, Pa., and Harry E. Mock, Chicago.

Dr. J. D. Martin Jr., Atlanta, Ga., read a paper on "Pulsating Exophthalmos." Discussed by Drs. Harry H. Kerr, Washington, D. C.; Alton Ochsner, New Orleans, and James Rudolph Jaeger, Denver.

Drs. George M. Curtis and James D. King, Columbus, Ohio, presented a paper on "Blast Injuries to the Lungs." Discussed by Drs. Casper F. Hegner, Denver, and George M. Curtis, Columbus, Ohio.

Dr. Harold L. Foss, Danville, Pa., read a paper on "Total Hysterectomy: A Consideration of a New Operative Technic." Discussed by Drs. V. S. Counseller, Rochester, Minn., and Conrad G. Collins, New Orleans.

Friday, June 12—Morning

The following officers were elected: chairman, Dr. Frederick A. Coller, Ann Arbor, Mich.; vice chairman, Dr. Lester R. Dragstedt, Chicago; secretary, Dr. Alton Ochsner, New Orleans; delegate, Dr. Henry W. Cave, New York; alternate, Dr. Grover C. Penberthy, Detroit; executive committee: Dr. Lloyd Noland, Fairfield Ala.; Dr. Arthur W. Allen, Boston, and Dr. Frederick Coller, Ann Arbor, Mich.; member of board of governors, American College of Surgeons, Dr. Owen H. Wangensteen, Minneapolis; representative to the Scientific Exhibit, Dr. Grover C. Penberthy, Detroit.

A motion was made by Dr. J. B. Haskins, Chattanooga, Tenn., seconded by Dr. E. Payne Palmer, Phoenix, Ariz., and carried, authorizing appointment of a committee to represent the section on the Council on Industrial Health. The chairman, in compliance with the action taken, appointed Drs. Lloyd Noland, Fairfield, Ala., chairman; William L. Estes Jr., Bethlehem, Pa.; Henry Chase Marble, Boston; Thomas M. Joyce, Portland, Ore., and S. Perry Rogers, Chicago.

Dr. U. V. Portmann, Cleveland, read a paper on "Classification of Primary Cases of Cancer of the Breast."

Dr. Frank E. Adair, New York, read a paper on "The Role of Surgery and Radiation in Cancer of the Breast."

These two papers were discussed by Drs. Shields Warren, Boston; C. D. Haagensen, New York; William C. White, New York; E. Payne Palmer, Phoenix, Ariz.; U. V. Portmann, Cleveland, and Frank E. Adair, New York.

Dr. Robert Elman, St. Louis, read a paper on "Acute Protein Deficiency in Shock, Burns, Intestinal Obstruction and Peritonitis." Discussed by Drs. Alexander Brunschwig, Chicago; H. N. Harkins, Detroit, and Robert Elman, St. Louis.

Drs. Elliott C. Cutler and Robert Zollinger, Boston, presented a paper on "Acute Cholecystitis." Discussed by Drs. Frank Glenn, New York; Henry F. Graham, Brooklyn; D. Woolfolk Barrow, Lexington, Ky.; Moses Behrend, Philadelphia, and Elliott C. Cutler, Boston.

Drs. F. W. Gaarde, L. E. Prickman and H. J. Raszkowski, Rochester, Minn., presented a paper entitled "Is the Asthmatic Patient a Good Surgical Risk?" Discussed by Drs. L. N. Gay, Baltimore; Geza de Takats, Chicago, and L. E. Prickman, Rochester, Minn.

Dr. William Bates, Philadelphia, read a paper on "Intraspinal Administration of Ammonium Sulfate." Discussed by Dr. Jacob Goeller, Irvington, N. J.

SECTION ON OBSTETRICS AND GYNECOLOGY

Wednesday, June 10—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr. Walter T. Dannreuther, New York.

Drs. A. R. Abarbanel, Baltimore, and Harry Aranow, New York, presented a paper on "Clinical Evaluation of Stilbestrol in Gynecology and Obstetrics." Discussed by Drs. Emil Novak, Baltimore; Robert B. Greenblatt, Augusta, Ga.; Joseph A. Hepp, Pittsburgh; Carlos A. P. Lamar, Miami, Fla.; Karl John Karnaky, Houston, Texas; John M. Freiheit, Waterbury, Conn., and A. R. Abarbanel, Baltimore.

Dr. Robert B. Greenblatt, Augusta, Ga., read a paper on "Implantation of Testosterone Propionate Pellets in Gynecic Disorders." Discussed by Drs. Willard M. Allen, St. Louis; Udall J. Salmon, New York; L. F. Hawkinson, Oakland, Calif.; Charles F. Geschickter, Baltimore; Carlos A. P. Lamar, Miami, Fla., and Robert B. Greenblatt, Augusta, Ga.

Dr. Alejandro Lipschutz, Santiago, Chile, read a paper on "Experimental Fibroids and the Antifibromatogenic Action of Steroid Hormones."

Dr. H. W. Mayes, Brooklyn, read a paper on "Vaginal Antisepsis During Labor: Ten Thousand Vaginal Deliveries Without a Death from Puerperal Infection." Discussed by Drs. Paul Titus, Pittsburgh; Robert Gordon Douglas, New York, and H. W. Mayes, Brooklyn.

Dr. Charles E. McLennan, Minneapolis, read a paper on "Conservative Treatment of Inversion of the Uterus." Discussed by Drs. W. Benson Harer, Philadelphia; W. A. Coventry, Duluth, Minn.; Louis E. Phaneuf, Boston; John Huberman, Newark, N. J., and Charles E. McLennan, Minneapolis.

Drs. J. Milton Singleton and Herbert F. Vanorden, Kansas City, Mo., presented a paper on "Vaginal Tampons in Menstrual Hygiene." Discussed by Drs. George Gray Ward, New York; Marie P. Warner, New York; Robert L. Dickinson, New York, and J. Milton Singleton, Kansas City, Mo.

Thursday, June 11—Afternoon

The following officers were elected: chairman, Dr. Louis E. Phaneuf, Boston; vice chairman, Dr. Wendell M. Long, Oklahoma City; secretary, Dr. Philip F. Williams, Philadelphia; executive committee: Dr. Norman F. Miller, Ann Arbor, Mich.; Dr. Walter T. Dannreuther, New York, and Dr. Louis E. Phaneuf, Boston; governors, American College of Surgeons, Dr. Emil Novak, Baltimore; Dr. Thomas K. Brown, St. Louis, and Dr. Alice Maxwell, San Francisco; delegate, Dr. J. P. Pratt, Detroit; alternate, Dr. Harvey B. Matthews, Brooklyn; representatives to American Committee on Maternal Welfare: Dr. G. C. Schauffler, Portland, Ore.; Dr. E. D. Plass, Iowa City, and Dr. R. D. Mussey, Rochester, Minn.; representatives to the American Board of Obstetrics and Gynecology: Dr. Francis Bayard Carter, Durham, N. C.; Dr. Louis E. Phaneuf, Boston, and Dr. Ludwig A. Emge, San Francisco.

A resolution was passed authorizing appointment of a Committee on Health of Women in Industry in the Section on Obstetrics and Gynecology of the American Medical Association, to cooperate with the Council on Industrial Medicine. A motion was made and passed that the chairman of the Section on Obstetrics and Gynecology should appoint a five man committee for this purpose.

Dr. Alvin J. B. Tillman, New York, read a paper on "Classification and Medical Relationships of Hypertensive-Albuminuric Pregnancy."

Dr. Howard C. Taylor Jr., New York, read a paper on "Endocrinologic Physiology of Hypertensive-Albuminuric Pregnancy."

Dr. William J. Dieckmann, Chicago, read a paper on "Etiology, Prophylaxis and Treatment of Hypertensive-Albuminuric Pregnancy."

These three papers were discussed by Drs. W. W. Herrick, New York; J. Isfred Hofbauer, Cincinnati; A. J. Rongy, New York, and William J. Dieckmann, Chicago.

Dr. Walter T. Dannreuther, New York, read the chairman's address, entitled "Educational Objectives of the American Board of Obstetrics and Gynecology."

Friday, June 12—Morning

A joint meeting was held with the Section on Radiology. The proceedings are reported in the minutes of that section.

SECTION ON OPHTHALMOLOGY

Wednesday, June 10—Morning

The meeting was called to order at 9:15 by the chairman, Dr. Lawrence T. Post, St. Louis.

Dr. Lawrence T. Post, St. Louis, read the chairman's address, entitled "Lifelong Care of the Eyes."

Dr. Moacyr E. Alvaro, São Paulo, Brazil, read a paper on "The Effects, Other Than Anti-Infectious, of the Sulfonamides on the Eye."

The following papers were read as a symposium on "Geriatrics":

Dr. John H. Morrissey, New York: "Urologic Geriatrics."

Dr. George M. Piersol, Philadelphia: "Medical Geriatrics."

Dr. Henry W. Woltman, Rochester, Minn.: "Neuropsychiatric Geriatrics."

Dr. Conrad Berens, New York: "Ophthalmic Geriatrics."

WEDNESDAY, JUNE 10—EVENING

Executive Session

A special executive session was held for the purpose of discussing the matter of optometric relations.

It was voted on motion made by Dr. Parker Heath, Detroit, seconded by Dr. Charles A. Bahn, New Orleans, that the section instruct its delegate to advise the House of Delegates of the American Medical Association that it wished to rescind the resolution of 1941.

THURSDAY, JUNE 11—MORNING

Dr. T. L. Terry, Boston, read a paper on "Fibroblastic Overgrowth of Persistent Tunica Vasculosa Lentis in Infants Born Prematurely." Discussed by Drs. Parker Heath, Detroit; Sanford Gifford, Chicago; Herman Goldberg, Baltimore, and T. L. Terry, Boston.

Dr. Walter B. Lancaster, Hanover, N. H., read a paper on "The Nature, Scope and Significance of Aniseikonia." Discussed by Drs. Ernest A. W. Sheppard, Washington, D. C.; Eric Liljencrantz, Washington, D. C.; Robert H. Peckham, Pensacola, Fla., and Walter B. Lancaster, Hanover, N. H.

Drs. Cecil S. O'Brien and J. H. Allen, Iowa City, presented a paper on "Ocular Changes in Young Diabetic Patients." Discussed by Drs. Glen G. Gibson, Philadelphia, and J. H. Allen, Iowa City.

Dr. Fred H. Verhoeff, Boston, read a paper on "A Simple Quantitative Test for Acuity and Reliability of Binocular Stereopsis." Discussed by Drs. Maynard C. Wheeler, New York; John B. Hitz, Milwaukee; K. W. Ascher, Cincinnati; Walter B. Lancaster, Hanover, N. H.; Morris Davidson, New York; Robert H. Peckham, Pensacola, Fla., and Fred H. Verhoeff, Boston.

Dr. Jacob Goldsmith, New York, read a paper on "Experimental Studies on the Dynamics of the Intracapsular Cataract Extraction, Suspensory Ligament and Hannover's Canal." Discussed by Drs. Manuel U. Troncoso, New York; Henry J. Minsky, New York; Fred H. Verhoeff, Boston, and Jacob Goldsmith, New York.

Executive Session

On motion made by Dr. Albert C. Snell, Rochester, N. Y., and seconded by Dr. H. E. Glock, Fort Wayne, Ind., it was voted unanimously that the delegate representing the section not be deprived of the privilege to vote in the House of Delegates.

Scientific Session

Drs. Joseph Tiffin, Lafayette, Ind., and Hedwig S. Kuhn, Hammond, Ind., presented a paper on "Color Discrimination in Industry." Discussed by Drs. Alfred Cowan, Philadelphia; Peter C. Kornfeld, Chicago, and Joseph Tiffin, Lafeyette, Ind.

Demonstration Session

Dr. David F. Gillette, Syracuse, N. Y., demonstrated a new eye shield.

FRIDAY, JUNE 12—MORNING

Demonstration Session

Dr. Edward Stieren, Pittsburgh, demonstrated a protective goggle for industry.

Executive Session

Dr. Derrick Vail, Cincinnati, read the report of the Committee on Visual Economics.

Dr. Derrick Vail, Cincinnati, read the report of the Committee on Awarding the Knapp Medal.

Dr. Conrad Berens, New York, read the report of the American Board of Ophthalmology.

Dr. Derrick Vail, Cincinnati, read the report on the Registry of Ophthalmic Pathology.

Dr. Derrick Vail, Cincinnati, read the report of the Committee on Scientific Exhibit.

Dr. Derrick Vail, Cincinnati, read the report of the Committee on the Museum of Ophthalmic History.

Dr. George Guibor, Ottawa, Ill., read the report of the Committee on Orthoptics.

Dr. William L. Benedict, Rochester, Minn., read the report of the Advisory Committee to the Eye Health Committee of the American Student Health Association.

Dr. Derrick Vail, Cincinnati, read the report of the Committee on Ophthaimic Literature (Joint).

Dr. S. Judd Beach, Portland, Maine, reported for the Joint Committee on Optics and Visual Physiology. He stated that Dr. Alfred Cowan of the Subcommittee on Visual Standards reported that the distance portion of the American Medical Association rating card, in percentages, did not correspond to the near part and recommended that the near part be made so that it is consistent with the distant part.

Dr. Albert C. Snell, Rochester, N. Y., gave the report of the Committee on Industrial Ophthalmology.

There was no report from the representative to the Council of the Pan American Congress, Dr. William L. Benedict, Rochester, Minn.

Dr. Derrick Vail, Cincinnati, read the report of the Committee on the Knapp Testimonial Fund.

Dr. Arthur J. Bedell, Albany, N. Y., reported as delegate of the section to the House of Delegates.

On motion made by Dr. E. C. Ellett, Memphis, Tenn., seconded by Dr. Fred H. Verhoeff, Boston, a vote of thanks was extended to Dr. Bedell for his long and satisfactory service in representing the section in the House of Delegates.

The following committee for awarding the Knapp Medal for 1942 was elected from the floor: Dr. John Woolfolk Burke, Washington, D. C.; Dr. Frank E. Burch, St. Paul, and Dr. E. C. Ellett, Memphis, Tenn.

On motion made by Dr. Conrad Berens, New York, seconded by Dr. Harry S. Gradle, Chicago, it was voted to accept all reports that had been presented.

The following officers were elected: chairman, Dr. Conrad Berens, New York; vice chairman, Dr. Robert von der Heydt, Chicago; secretary, Dr. Derrick Vail, Cincinnati; executive committee: Dr. Albert C. Snell, Rochester, N. Y.; Dr. Lawrence T. Post, St. Louis; Dr. Conrad Berens, New York; delegate, Dr. Arthur J. Bedell, Albany, N. Y.; alternate, Dr. Shaler A. Richardson, Jacksonville, Fla.

The following committee appointments were recommended by the executive committee and approved:

To fill a vacancy on the American Committee (Joint) on Optics and Visual Physiology, representing the Section on Ophthalmology, the reappointment of Dr. Sanford Gifford, Chicago, to serve for a term of three years.

The reelection of Dr. Conrad Berens, New York, to the Committee on American Board of Ophthalmology, to serve for a term of four years.

As representative of the section to the College of Surgeons, Board of Governors, Dr. M. Hayward Post, St. Louis, for a term of one year.

The appointment of Dr. J. V. Cassady, South Bend, Ind., to fill a vacancy on the Committee on Industrial Ophthalmology (Joint).

The appointment of Dr. Walter B. Lancaster, Hanover, N. H., to the American Orthoptic Council for a term of three years, to fill a vacancy.

To the Committee on Scientific Exhibit from the section, the appointment of Dr. A. B. Reese, New York.

To continue unchanged the Committee on Visual Economics, the Committee on National Museum of Ophthalmic Pathology, the Committee on Museum of Ophthalmic History, the Advisory Committee of Student Health Association and the Committee on Ophthalmic Literature (Joint).

The Research Medal Award was presented in absentia to Dr. Manuel Uribe Troncoso, New York.

Scientific Session

Dr. Edmund B. Spaeth, Philadelphia, read a paper on "The Removal of Metallic Foreign Bodies from the Eyeball and the Orbit." Discussed by Drs. Edward Stieren, Pittsburgh; Raymond L. Pfeiffer, New York; Harvey E. Thorpe, Pittsburgh; Oscar Wilkinson, Washington, D. C.; Elbert S. Sherman, Newark, N. J., and Edmund B. Spaeth, Philadelphia.

Dr. Lowell S. Selling, Detroit, read a paper on "The Ophthalmologist's Place in the Prevention of Traffic Accidents." Discussed by Drs. S. Judd Beach, Portland, Maine; Albert C. Snell, Rochester, N. Y., and Lowell S. Selling, Detroit.

Dr. John S. McGavic, New York, read a paper on "Lymphomatous Tumors of the Eye and Its Adnexa." Discussed by Drs. William L. Benedict, Rochester, Minn.; Benjamin Rones, Washington, D. C.; Arthur J. Bedell, Albany, N. Y., and John S. McGavic, New York.

Dr. James W. Smith, New York, read a paper on "Ochronosis of the Sclera and Cornea Complicating Alkaptonuria: Review of the Literature and Report of Four Cases." Discussed by Drs. Milton L. Berliner, New York, and James W. Smith, New York.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2:05 by the chairman, Dr. Gordon F. Harkness, Davenport, Iowa.

Dr. Herman J. Sternstein, Boston, read a paper on "A Quantitative Evaluation of Vasoconstrictor Agents in the Obstructed Nose." Discussed by Drs. A. C. Hilding, Duluth, Minn.; Lewis T. Buckman, Wilkes-Barre, Pa.; John J. Shea, Memphis, Tenn., and Herman J. Sternstein, Boston.

Executive Session

Dr. Burt R. Shurly, Detroit, delegate from the section, reported concerning the resolution proposed in the House of Delegates depriving section delegates of the right to vote.

Scientific Session

Dr. Henry B. Orton, Newark, N. J., read a paper on "Diagnosis and Treatment of Deep Neck Infections." Discussed by Drs. August L. Beck, New Rochelle, N. Y.; Samuel Iglauer, Cincinnati, and Henry B. Orton, Newark, N. J.

Dr. Daniel S. Cunning, New York, read a paper on "Rhinoscleroma." Discussed by Dr. Francis Carter Wood, New York; Fred W. Dixon, Cleveland; Joseph I. Kemler, Baltimore, and Daniel S. Cunning, New York.

Dr. Leon D. Carson, Washington, D. C., read a paper on "Otolaryngologic Problems Occurring in Fliers." Discussed by Drs. R. J. Hunter, Philadelphia; A. H. Andrews Jr., Chicago; Herman J. Sternstein, Boston, and Leon D. Carson, Washington, D. C.

Dr. Joseph C. Donnelly, Philadelphia, read a paper on "Pulmonary Tuberculosis Masquerading as Laryngitis." Discussed by Drs. Frank R. Spencer, Boulder, Colo.; Frederick T. Hill, Waterville, Maine; Joseph I. Kemler, Baltimore, and Joseph C. Donnelly, Philadelphia.

Executive Session

By unanimous vote, Lieut. Col. Lee S. Fountain, 309 Thelma Drive, San Antonio, Texas, and Harold H. Murray, D.M.D., 710 General Insurance Building, Seattle, were nominated for election to Associate Fellowship in the American Medical Association.

THURSDAY, JUNE 11—AFTERNOON

Executive Session

The following officers were elected: chairman, Dr. Claude C. Cody Jr., Houston, Texas; vice chairman, Dr. William H. Johnston, Santa Barbara, Calif.; secretary, Dr. Louis H. Clerf, Philadelphia; executive committee: Dr. LeRoy A. Schall, Boston; Dr. Gordon F. Harkness, Davenport, Iowa, and Dr. Claude C. Cody Jr., Houston, Texas; delegate, Dr. Burt R. Shurly, Detroit; alternate, Dr. Gordon F. Harkness, Davenport, Iowa.

Dr. John J. Shea, Memphis, Tenn., reported for the American Board of Otolaryngology that forty-three examinations had been held since 1924 in twenty-four different cities and that a total of 3,467 otolaryngologists had been certificated. Dr. Shea stated that Dr. Joseph C. Beck, Chicago, the other member of the section on the board, was ill, and suggested that flowers be sent to him.

Dr. W. E. Grove, Milwaukee, read the report of the Consultants' Committee to the Council on Physical Therapy of the American Medical Association and moved its adoption. The motion was regularly seconded and carried.

The chairman announced that the Council on Industrial Health had requested the appointment of an advisory committee to work with it in the field of otolaryngology, and Dean Lierle, Iowa City; W. E. Grove, Milwaukee, and Carlton Stewart Nash, Rochester, N. Y., were appointed, with the officers of the section as ex officio members and Dr. George Shambaugh, Chicago, chairman.

The chairman appointed Dr. W. E. Grove, Milwaukee, as a candidate for the board of governors of the American College of Surgeons.

Scientific Session

Dr. Gordon F. Harkness, Davenport, Iowa, read the chairman's address, entitled "Postgraduate Education and Delivery of Medical Service."

Dr. John J. Shea, Memphis, Tenn., read a paper on "The Management of Fractures Involving the Paranasal Sinuses." Discussed by Drs. Claire L. Straith, Detroit; Robert H. Ivy, Philadelphia; C. C. Coleman, Richmond, Va.; M. F. Arbuckle, St. Louis, and John J. Shea, Memphis, Tenn.

Dr. Simon Jesberg, Los Angeles, read a paper on "Laryngeal Stenosis." Discussed by Drs. Fletcher D. Woodward, Charlottesville, Va.; M. F. Arbuckle, St. Louis, and Simon Jesberg, Los Angeles.

Dr. Edmund P. Fowler, New York, read a paper on "A Simple Method for Measuring the Percentage of Capacity for Hearing Speech." Discussed by Drs. W. E. Grove, Milwaukee, and Douglas Macfarlan, Philadelphia.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Pediatrics. The proceedings are reported in the minutes of that section.

SECTION ON PEDIATRICS

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9:20 by the chairman, Dr. Philip M. Stimson, New York.

Dr. Stanley Nichols, Asbury Park, N. J., presented a resolution to be submitted to the House of Delegates urging the Section on Pediatrics of the American Medical Association, and the various governmental agencies concerned (Office of Defense, Health, Welfare Services, Children's Bureau and Office of Civilian Defense) to work cooperatively for better child health during the war.

Dr. William A. Schonfeld, New York, read a paper on "Management of Male Pubescence." No discussion.

Drs. Philip Cohen and Samuel J. Scadron, New York, presented a paper on "Placental Transmission of Pertussis Antibodies Following Inoculation of the Mother During Pregnancy." Discussed by Drs. Samuel J. Scadron, New York, and William L. Bradford, Rochester, N. Y.

Drs. Joseph Stokes Jr. and Werner Henle, Philadelphia, presented a paper on "Studies on Methods of Prevention of Epidemic Influenza." Discussed by Drs. Albert B. Sabin, Cincinnati, and E. C. Rosenow, Rochester, Minn.

Drs. William F. Petersen and Alvin Mayne, Chicago, presented a paper on "Cytoplasmic Modification of Genetic Trends as Observed in the Newborn." Discussed by Dr. Alvin Mayne, Chicago.

Drs. Abraham M. Litvak, Irving J. Sands and Harry Gibel, Brooklyn, presented a paper on "Measles Encephalitis: Report of Fifty-Six Cases with Follow-Up Studies in Thirty Cases." Discussed by Drs. Murray B. Gordon, Brooklyn; Irving J. Sands, Brooklyn, and Joseph Stokes Jr., Philadelphia.

Drs. Abram Kanof, Isidor Leber and Benjamin Kramer, Brooklyn, presented a paper on "Chemotherapy in Childhood Sepsis." Discussed by Drs. Reuben Ottenberg, New York; George J. Boines, Wilmington, Del., and Benjamin Kramer, Brooklyn.

THURSDAY, JUNE 11—MORNING

The secretary, Dr. Hugh L. Dwyer, Kansas City, Mo., presented a report on the Abraham Jacobi Memorial Fund. Dr. Albert D. Kaiser, Rochester, N. Y., presented a motion for the adoption of a resolution proposing that this fund be used as the initial endowment fund for the establishment of a Pediatric Historical Museum, to be operated by a joint museum board of the Section on Pediatrics of the American Medical Association, the American Academy of Pediatrics and the American Pediatrics Society. The motion was seconded by Dr. William D. Weston, Columbia, S. C., and carried unanimously.

The following officers were elected: chairman, Dr. Hugh L. Dwyer, Kansas City, Mo.; vice chairman, Dr. Francis Scott Smyth, San Francisco; secretary, Dr. Gilbert J. Levy, Memphis, Tenn.; delegate, Dr. William Weston, Columbia, S. C.; alternate, Dr. Julius H. Hess, Chicago; representative to the Scientific Exhibit, Dr. Sterling H. Ashmun, Dayton, Ohio; representative to the American Board of Pediatrics, Dr. Edward Shaw, San Francisco.

Drs. Frank C. Neff, Kansas City, Mo.; Hugh L. Dwyer, Kansas City, Mo., and Albert D. Kaiser, Rochester, N. Y., were elected representatives of the section on the Pediatrics Museum Board.

A report of the representatives of the section on the American Board of Pediatrics was presented by Dr. Hugh L. Dwyer, Kansas City, Mo.

Dr. Philip M. Stimson, New York, read the chairman's address, entitled "A Rationalization of the Sister Kenny Treatment of Poliomyelitis."

Dr. George W. Caldwell, New York, read a paper on "Treatment of Nephrosis with Vitamin A and Unsaturated Fatty Acid Therapy." Discussed by Dr. Marshall C. Pease Jr., New York.

Drs. Herman Schwarz, Jerome L. Kohn and Samuel Weiner, New York, presented a paper on "Observations on Lipoid Nephrosis over a Period of Twenty Years." Discussed by Dr. Lee E. Farr, Wilmington, Del.

Drs. I. Michael Levin, Samuel J. Hoffman, David S. Koransky, Irving B. Richter and Bernard Gumbiner, Chicago, presented a paper on "Congenital and Acquired Syphilis in Infants and Children: Treatment with Massive Doses of Arsenic Intravenously." Discussed by Dr. Samuel J. Hoffman, Chicago.

Drs. H. Harris Perlman and A. M. Dannenberg, Philadelphia, presented a paper on "Nicotine: Excretion in Breast Milk and Urine from Cigaret Smoking; Its Effect on Nursling." Discussed by Dr. W. B. Thompson, Los Angeles.

Drs. Jesse G. M. Bullowa and Janet D. Alterman, New York, presented a paper on "Pertussis Immunity with Toxin and with Antitoxin." Discussed by Dr. Lewis Henry Koplik, New York.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Laryngology, Otology and Rhinology.

Dr. D. E. Staunton Wishart, Toronto, Ont., read a paper on "Bronchiectasis and Sinusitis in Children: Their Interrelationship and Treatment." Discussed by Dr. Louis H. Clerf, Philadelphia.

Drs. Adolph G. DeSanctis and Vincent deP. Larkin, New York, presented a paper on "A Survey of Two Thousand Cases of Otitis Media and Mastoiditis in Children." Discussed by Dr. Vincent deP. Larkin, New York.

Dr. James Sonnett Greene, New York, read a paper on "Atypical Laryngeal and Vocal Changes in Adolescence." Discussed by Dr. George B. Dorff, Brooklyn.

Dr. Myron F. Metzenbaum, Cleveland, read a paper on "Fractures and Dislocations of the Outer and Inner Nasal Framework in Infants and Young Children and Orthopedic Methods for their correction."

Dr. James B. Costen, St. Louis, read a paper on "Reflex Pain Effects Produced by Abnormal Movement of the Lower Jaw." Discussed by Drs. Braswell E. Collins, Waycross, Ga., and A. E. Bennett, Omaha.

SECTION ON EXPERIMENTAL MEDICINE AND THERAPEUTICS

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Wallace M. Yater, Washington, D. C.

Drs. Robert M. Daley and Harry E. Ungerleider, New York, and Richard S. Gubner, Brooklyn, presented a paper on "Prognosis in Hypertension." Discussed by Dr. Benjamin Jablons, New York.

Dr. O. P. J. Falk, St. Louis, read a paper on "The Causes and Prevention of Sudden Death in Coronary Disease."

Dr. Edward L. Bortz, Philadelphia, read a paper on "Therapeutics of Pneumonia on a Statewide Basis." Discussed by Drs. Hobart A. Reimann, Philadelphia, and Walter F. Donaldson, Pittsburgh.

Drs. Ignacio Chavez and B. Sepulveda, Mexico City, Mexico, presented a paper on "The Functional Value of the Liver in Heart Failure: Experimental Study." Discussed by Drs. George Herrmann, Galveston, Texas; A. P. Munsch, St. Louis, and Ignacio Chavez, Mexico City, Mexico.

Drs. Morris T. Friedell and C. M. Shaar, Philadelphia, presented a paper on "Effect of Gastric Resection on Gastric Acidity." Discussed by Drs. Waltman Walters, Rochester, Minn., and C. M. Shaar, Philadelphia.

Drs. George V. Byfield, Stanley E. Telser and Robert W. Keeton, Chicago, presented a paper on "Observations on Renal Blood Flow and Glomerular Filtration Rate as Influenced by Environmental Temperature Changes." Discussed by Dr. Benjamin Jablons, New York.

Dr. Samuel S. Altshuler, Detroit, read a paper on "Clinical Use of Amino Acids for the Maintenance of Nitrogen Equilibrium." Discussed by Drs. Melville Sahyun (Ph.D.), Detroit; Harry Koster, Brooklyn, and Samuel S. Altshuler, Detroit.

THURSDAY, JUNE 11—MORNING

The following officers were elected: chairman, Tinsley R. Harrison, Winston-Salem, N. C.; vice chairman, Edgar V. Allen, Rochester, Minn.; secretary, D. L. Wilbur, San Francisco; delegate, O. P. J. Falk, St. Louis; alternate, Garnett Cheney, San Francisco; representative to the Scientific Exhibit, George Herrmann, Galveston, Texas; executive committee: C. M. Gruber, Philadelphia; Wallace M. Yater, Washington, D. C., and Tinsley R. Harrison, Winston-Salem, N. C.

Dr. Wallace M. Yater, Washington, D. C., read the chairman's address, entitled "What's Wrong with Modern Therapeutics?"

Drs. Leon Unger and A. Alvin Wolf, Chicago, presented a paper on "Treatment of Bronchial Asthma: A Survey of the Value of Treatment During Twenty Years." Discussed by Drs. Ralph G. Mills, Decatur, Ill.; George F. Harsh, San Diego, Calif.; Herbert F. Robb, Belleville, Mich., and Leon Unger, Chicago.

Drs. Carl V. Moore, St. Louis; Richard W. Vilter and Tom D. Spies, Cincinnati, presented a paper on "Treatment of Anemia Associated with Uncorrected Vitamin Deficiency: Beneficial Effects of Iron." Discussed by Drs. William Dameshek, Boston, and Carl V. Moore, Cincinnati.

Drs. Janet G. Travell, Seymour H. Rinzler and Myron Herman, New York, presented a paper on "Treatment of Pain and Disability of Shoulder and Arm by Intramuscular Injection of Procaine Hydrochloride."

Drs. R. H. Kampmeier and H. B. Henning, Nashville, Tenn., presented a paper on "Treatment of Syphilis with Clorarsen." Discussed by Drs. Walter E. Vest, Huntington, W. Va., and R. H. Kampmeier, Nashville, Tenn.

Dr. R. H. Freyberg, Ann Arbor, Mich., read a paper on "Treatment of Arthritis with Vitamin and Endocrine Preparations: Emphasis of Their Limited Value."

Dr. Carl H. Greene, New York, read a paper on "The Treatment of Portal Cirrhosis: Physiologic Considerations." Discussed by Drs. Seymour J. Gray, Chicago; Wallace M. Yater, Washington, D. C., and Carl H. Greene, New York.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Practice of Medicine.

Drs. Irving S. Wright and Andrew G. Prandoni, New York, presented a paper on "Dicoumarin [3,3'-Methylene-Bis-(4-Hydroxycoumarin)]: Its Pharmacologic and Therapeutic Action in Man."

Drs. Jesse L. Bollman and F. W. Preston, Rochester, Minn., presented a paper on "Dicoumarin [3,3'-Methylene-Bis-(4-Hydroxycoumarin)]: Experimental Studies."

Drs. Edgar V. Allen, Nelson W. Barker and John M. Waugh, Rochester, Minn., presented a paper on "Dicoumarin [3,3'-Methylene-Bis-(4-Hydroxycoumarin)]: Clinical Studies."

These three papers were discussed by Drs. Shepard Shapiro, New York, and K. K. Chen, Indianapolis.

Drs. Lester M. Morrison, William A. Swalm, W. Emery Burnett, Frank W. Konzelmann and Earle H. Spaulding, Philadelphia, presented a paper on "The Response of Experimental and Clinical Gallbladder Infections to Sulfonamide Compounds." Discussed by Dr. William A. Swalm, Philadelphia.

Drs. M. J. Shapiro and Ancel B. Keys, Minneapolis, presented a paper on "An Analysis of the Operative Treatment of Patent Ductus Arteriosus." Discussed by Drs. John P. Hubbard, Boston; Arthur S. W. Touroff, New York, and M. J. Shapiro, Minneapolis.

Drs. Arthur M. Master, Bethesda, Md., and Simon Dack and Harry L. Jaffe, New York, presented a paper on "Cardiac Efficiency Following Recovery from Acute Coronary Occlusion: The Results of Various Functional Tests." Discussed by Drs. Cary Eggleston, New York; Howard B. Sprague, Newport, R. I., and Arthur M. Master, Bethesda, Md.

Drs. Howard B. Sprague, Newport, R. I., and Harold E. B. Pardee, New York, presented an unprepared, informal discussion of electrocardiograms.

SECTION ON PATHOLOGY AND PHYSIOLOGY

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. J. P. Simonds, Chicago.

Dr. J. P. Simonds, Chicago, read the chairman's address, entitled "Clinical Interpretation of Renal Pathology in Hypertension and Glomerulonephritis."

Drs. George E. Wakerlin and C. A. Johnson, Chicago, presented a paper on "Treatment of Experimental Renal Hypertension with Renin." Discussed by Drs. Tinsley R. Harrison, Winston-Salem, N. C.; Benjamin Jablons, New York, and George E. Wakerlin, Chicago.

Drs. Piero Pio Foa, Ward W. Woods and Max M. Peet, Ann Arbor, Mich., presented a paper on "Effect of Splanchnicectomy on Renal Blood Flow in Arterial Hypertension." Discussed by Drs. Harold Lamport, New York; Hugo A. Freund, Detroit; George E. Wakerlin, Chicago, and Piero Pio Foa, Ann Arbor, Mich.

Dr. Alberto Hurtado, Lima, Peru, read a paper on "Chronic Altitude Sickness."

Dr. Gail M. Dack, Chicago, read a paper on "Characteristics of Food Poisoning Outbreaks of Bacterial Origin." Discussed by Drs. George J. Boines, Wilmington, Del., and Gail M. Dack, Chicago.

Dr. Israel Davidsohn, Chicago, read a paper on "Irregular Isoagglutinins." Discussed by Drs. Philip Levine, Newark, N. J.; Frederic Feldman, Brooklyn, and Israel Davidsohn, Chicago.

A nominating committee was appointed, consisting of Drs. George E. Wakerlin, Chicago; Frank W. Hartman, Detroit, and Eustice L. Benjamin, Evanston, Ill.

On motion by Dr. Hugo A. Freund, Detroit, seconded by Dr. J. J. Moore, Chicago, it was voted to recommend to the House of Delegates of the American Medical Association the election of Milan V. Novak, Ph.D., M.D., Chicago, and Clarence W. Muehlberger, Ph.D., Lansing, Mich., to Associate Fellowship in the American Medical Association.

THURSDAY, JUNE 11—AFTERNOON

The chairman appointed Dr. George E. Wakerlin, Chicago, to serve on the executive committee in the absence of Dr. Carl J. Wiggers, Cleveland.

The following officers were elected: chairman, Frank C. Mann, Rochester, Minn.; vice chairman, Virgil H. Moon, Philadelphia; secretary, J. J. Moore, Chicago; delegate, Leonard W. Larson, Bismarck, N. D.; alternate, J. J. Moore, Chicago; executive committee: Carl J. Wiggers, Cleveland; J. P. Simonds, Chicago, and Frank C. Mann, Rochester, Minn.

The chairman appointed Frank W. Konzelmann, Philadelphia, as representative to the Scientific Exhibit.

Drs. Winfield L. Butsch, Buffalo, read a paper on "Clinical Experiences with 3,3'-Methylene-Bis-(4-Hydroxycoumarin)." Discussed by Dr. Alton Ochsner, New Orleans.

Dr. David I. Macht, Baltimore, read a paper on "Experimental Studies Concerning Heparin." Discussed by Drs. Jay McLean, Columbus, Ohio; Geza de Takats, Chicago; R. H. K. Foster, Nutley, N. J.; N. C. Gilbert, Chicago, and David I. Macht, Baltimore.

Dr. Albert C. Hunter, Washington, D. C., read a paper on "The Evaluation of Antiseptics." Discussed by Drs. Ward J. MacNeal, New York, and Albert C. Hunter, Washington, D. C.

Drs. Roy R. Kracke, Emory University, Ga., and Eleanor W. Townsend, Atlanta, Ga., presented a paper on "The Effect of the Sulfonamide Drugs on the Blood Platelets." Discussed by Drs. David I. Macht, Baltimore; Harry J. Corper, Denver, and Roy R. Kracke, Emory University, Ga.

Drs. Harry J. Corper and Maurice L. Cohn, Denver, presented a paper on "The Presence of Avirulent Tubercle Bacilli in Pulmonary Tuberculosis in Man."

Dr. Frank W. Hartman, Detroit, read a paper on "The Relative Value of Pectin Solution in Shock." Discussed by Drs. Samuel D. Jacobson, Eloise, Mich.; Harry J. Corper, Denver; Virgil H. Moon, Philadelphia, and Frank W. Hartman, Detroit.

The delegate, Dr. Leonard W. Larson, Bismarck, N. D., gave a report on the proceedings of the House of Delegates.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Gastro-Enterology and Proctology. The proceedings are reported in the minutes of that section.

SECTION ON NERVOUS AND MENTAL DISEASES

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9:15 by the vice chairman, Dr. A. R. Vonderahe, Cincinnati.

Drs. Franklin G. Ebaugh and Charles A. Rymer, Denver, presented a paper on "Critical Review of Shock Therapies." Discussed by Drs. A. E. Bennett, Omaha; Walter Freeman, Washington, D. C., and Franklin G. Ebaugh, Denver.

Dr. Louis A. Lurie, Cincinnati, read a paper on "Personality Changes and Behavior Disorders of Children Due to Pertussis: A Report Based on the Study of Five Hundred Problem Children." Discussed by Drs. A. R. Vonderahe, Cincinnati; Charles Bradley, East Providence, R. I., and Louis A. Lurie, Cincinnati.

Drs. Walter L. Voegtlin, Frederick Lemere and Paul F. O'Hollaren, Seattle, presented a paper on "Conditioned Reflex Treatment of Chronic Alcoholism." Discussed by Drs. Joseph Thimann, Boston; James P. King, Radford, Va.; Robert V. Seliger, Baltimore, and Frederick Lemere, Seattle.

Dr. A. Earl Walker, Chicago, read a paper on "Mesencephalic Tractotomy: A Method for the Relief of Unilateral Intractable Pain." Discussed by Drs. Francis C. Grant, Philadelphia; Max M. Peet, Ann Arbor, Mich.; Paul C. Bucy, Chicago, and A. Earl Walker, Chicago.

Dr. J. Rudolph Jaeger, Denver, read a paper on "Ligation of the Superior Longitudinal Sinus." Discussed by Drs. James L. Poppen, Boston; J. W. Watts, Washington, D. C., and J. Rudolph Jaeger, Denver.

THURSDAY, JUNE 11—MORNING

The following officers were elected: chairman, J. M. Nielsen, Los Angeles; vice chairman, Theodore A. Watters, New Orleans; secretary, R. P. Mackay, Chicago; executive committee: Tom B. Throckmorton, Des Moines, Iowa; Stanley Cobb, Boston, and J. M. Nielsen, Los Angeles; delegate, Henry R. Viets, Boston; alternate, Joseph P. Evans, Cincinnati; representative to Scientific Exhibit, Frederick P. Moersch, Rochester, Minn.; representative to American Board of Psychiatry and Neurology, Percival Bailey, Chicago; representative to American Board of Neurological Surgery, Paul C. Bucy, Chicago.

Dr. Paul C. Bucy, Chicago, gave a report from the American Board of Neurological Surgery, reporting that the board was planning to hold another examination in Chicago this week particularly for young men being called into the armed forces. The report was received and placed on file.

The report of the Committee on Industrial Neuropsychiatry was given by Dr. Paul C. Bucy, Chicago, in the absence of Dr. Theodore T. Stone, Chicago. The report was received and placed on file.

Dr. Walter Freeman, Washington, D. C., gave a report from the American Board of Psychiatry and Neurology, reporting one thousand, four hundred and fifty-five diplomates. The report was received and placed on file.

Motion was made, seconded and carried that the secretary send a telegram to Dr. Stanley Cobb, Boston, chairman of the section, who was absent from the meeting.

Drs. Joseph H. Globus, New York, and Milton R. Saperstein, Bellerose, N. Y., presented a paper on "Massive Hemorrhage into Brain Tumor: Its Significance and Probable Relationship to Rapidly Fatal Termination and Antecedent Trauma." Discussed by Drs. Paul C. Bucy, Chicago, and Joseph H. Globus, New York.

Drs. W. McD. Hammon, San Francisco, and Frederik B. Bang, Princeton, N. J., presented a paper on "Epidemiologic Studies of Encephalitis, Eastern and Western Equine and St. Louis Types, in Several Western States."

Drs. James P. Leake, Bethesda, Md.; J. O. Arnson, Bismarck, N. D.; F. I. Darrow, Fargo, N. D.; R. E. Dyson, Minot, N. D.; A. C. Fortney, Fargo, N. D.; F. J. Hill, Bismarck, N. D.; O. W. Johnson, Rugby, N. D., and L. W. Larson, Bismarck, N. D., presented a paper on "Epidemic of Encephalitis of 1941."

These two papers were discussed by Drs. Carl TenBroeck, Princeton, N. J.; E. C. Rosenow, Rochester, Minn.; Irving J. Sands, Brooklyn; Max H. Weinberg, Pittsburgh; Joseph W. Mountin, Washington, D. C.; L. W. Larson, Bismarck, N. D.; Frederik B. Bang, Princeton, N. J., and James P. Leake, Bethesda, Md.

Dr. Eben J. Carey, Milwaukee, read a paper on "Physiologic and Pathologic Ameboid Motions of Motor End Plates." Discussed by Drs. Ernest A. Spiegel, Philadelphia, and Eben J. Carey, Milwaukee.

Dr. Michael Scott, Philadelphia, read a paper on "Nontraumatic Effusions (Hygromas) of the Subdural Space as a Cause of Obscure Cerebral Symptoms." Discussed by Drs. Ernest A. Spiegel, Philadelphia; Paul C. Bucy, Chicago, and Michael Scott, Philadelphia.

Dr. Eric Miles Atkinson, New York, read a paper on "Ménière's Syndrome and Migraine: Observations on a Common Causal Relationship." Discussed by Drs. Bayard T. Horton, Rochester, Minn.; Mary Elizabeth O'Sullivan, New York; Wilbur A. Muehlig, Omaha, and Eric Miles Atkinson, New York.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Orthopedic Surgery.

Drs. Ralph K. Ghormley, J. Grafton Love and Henry Herman Young, Rochester, Minn., presented a paper on "The 'Combined Operation' in Low Back and Sciatic Pain." Discussed by Drs. Henry Briggs, East Orange, N. J.; A. W. Adson, Rochester, Minn.; Lee A. Hadley, Syracuse, N. Y.; Edwin W. Ryerson, Chicago, and Ralph K. Ghormley, Rochester, Minn.

Dr. Henry R. Viets, Boston, gave a report as delegate to the House of Delegates.

A Panel Discussion on Poliomyelitis was participated in by Drs. A. R. Vonderahe, Cincinnati, moderator; D. Y. Solandt, Toronto, Ont.; Albert B. Sabin, Cincinnati; H. M. Hines, Iowa City; H. R. McCarroll, St. Louis, and Frank R. Ober, Boston.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. C. F. Lehmann, San Antonio, Texas.

Dr. Clyde L. Cummer, Cleveland, representative of the section in the House of Delegates, reported on the recommendations of the Judicial Council to the House of Delegates that the Constitution, article 5, section 2, be amended to make delegates elected by the sections of the Scientific Assembly ex officio delegates without the right to vote or because of the number of members of the Association now in government service and, therefore, unlikely to wield influence on their representation in this House of Delegates, that all action be postponed and the reapportionment in 1943 be made under the present constitutional provisions.

On motion made by Dr. Cummer, seconded by Dr. J. Gardner Hopkins, New York, and carried, it was voted that the section express itself as opposed to the withdrawal of the vote from its representative to the House of Delegates, the exact wording of the resolution to be left with the executive committee to be presented at the section meeting on Thursday, for use in the final meeting of the House of Delegates in the afternoon.

Dr. Howard Fox, New York, editor of the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY, read his report.

Dr. C. F. Lehmann, San Antonio, Texas, read the chairman's address, entitled "Dermatology in the Armed Forces."

Drs. V. Pardo Castello and Francisco R. Tiant, Havana, Cuba, presented a paper on "Leprosy: The Correlation of Its Clinical, Immunologic, Pathologic and Bacteriologic Aspects." Discussed by Drs. Howard Fox, New York; Marion B. Sulzberger, New York; Alfred Hollander, Springfield, Mass.; Paul Gross, New York; Guy H. Faget, Carville, La.; Fred D. Weidman, Philadelphia, and V. Pardo Castello, Havana.

Drs. William H. Kaufman and Dudley C. Smith, Charlottesville, Va., presented a paper on "Cutaneous Changes in the Sprue Syndrome." Discussed by Drs. J. Lamar Callaway, Durham, N. C.; Herman Sharlit, New York; Paul Gross, New York; E. Myles Standish, Hartford, Conn.; Merlin T.-R. Maynard, San Jose, Calif., and Dudley C. Smith, Charlottesville, Va.

Dr. William H. Guy, Pittsburgh, read a paper entitled "Dermatologists for the Army and Navy." Discussed by Drs. Marion B. Sulzberger, New York; Howard Fox, New York; Donald M. Pillsbury, Philadelphia; C. Guy Lane, Boston; Dudley C. Smith, Charlottesville, Va.; Davis W. Goldstein, Fort Smith, Ark., and William H. Guy, Pittsburgh.

Dr. Carmen C. Thomas, Philadelphia, read a paper on "Sarcoid Disease." Discussed by Drs. Cleveland J. White, Chicago; George T. Harrell, Winston-Salem, N. C.; J. Lamar Callaway, Durham, N. C.; Francis A. Ellis, Baltimore; Paul E. Bechet, New York; Fred D. Weidman, Philadelphia; Walter C. Jones, Birmingham, Ala.; Adolph Rostenberg Jr., Washington, D. C.; Carmen C. Thomas, Philadelphia, and George T. Harrell, Winston-Salem, N. C.

Drs. Adolph H. Conrad, Adolph H. Conrad Jr. and Richard S. Weiss, St. Louis, presented a paper on "Sesame Oil Tumors." Discussed by Drs. Fred D. Weidman, Philadelphia; Francis A. Ellis, Baltimore; J. Lowry Miller, New York, and Adolph H. Conrad, St. Louis.

Dr. J. Lowry Miller, New York, read a paper on "Primary Relapsing Febrile Nodular Panniculitis." Owing to the lateness of the hour, discussion on the paper was postponed until the meeting of the section on Thursday morning.

THURSDAY, JUNE 11—MORNING

The paper read by Dr. J. Lowry Miller, New York, on "Primary Relapsing Febrile Nodular Panniculitis" at the Wednesday morning session was discussed by Drs. Loretta Joy Cummins, Boston; William A. Rosenberg, Chicago; Fred D. Weidman, Philadelphia; Paul E. Bechet, New York, and J. Lowry Miller, New York.

Dr. C. Guy Lane, Boston, read the report of the American Board of Dermatology and Syphilology.

Dr. John G. Downing, Boston, read the following resolution from the executive committee:

WHEREAS, The suggestion has been made by the Judicial Council of the House of Delegates that the Constitution of the American Medical Association be amended to withdraw the right to vote from the delegates from the scientific sections; be it

Resolved, By the Section on Dermatology and Syphilology that it express its objections to this proposal for the following reasons:

1. The scientific sections are an integral part of the Association and enhance the value of the meeting to the membership at large through their program and their contributions to the scientific exhibits.

2. Intimate relationship to the governing body through a voting delegate to act as liaison officer is desirable to interpret the points of view of each group to the other.

3. It would be difficult, if not impossible, to secure a member to act as a so-called ex officio delegate through the sessions of the House when present only as an observer with no right to participate in the deliberations except on matters directly bearing on his specialty.

On motion by Dr. Clyde L. Cummer, Cleveland, seconded by Dr. Fred D. Weidman, Philadelphia, it was voted that the resolution be adopted.

Drs. Arthur W. Grace, Brooklyn, and Geoffrey W. Rake, New Brunswick, N. J., presented a paper on "The Complement Fixation Test for Lymphogranuloma Venereum." Discussed by Drs. David Bloom, New York; Helen O. Curth, New York; Frank C. Combes, New York; Harry M. Robinson, Baltimore; Marion B. Sulzberger, New York; Harry C. Saunders, New York; Maurice J. Strauss, New Haven, Conn., and Arthur W. Grace, Brooklyn.

Drs. William A. Clark and D. Truett Gandy, Houston, Texas, presented a paper on "An Improved Method of Reporting Serologic Tests for Syphilis." Discussed by Drs. John H. Stokes, Philadelphia; Benjamin S. Kline, Cleveland, and William A. Clark, Houston, Texas.

Dr. Reuben L. Kahn, Ann Arbor, Mich., read a paper on "Detection of Biologic False Positives in Serologic Reaction of Syphilis." Discussed by Drs. Charles R. Rein, New York; Benjamin S. Kline, Cleveland; J. F. Mahoney, Washington, D. C., and Reuben L. Kahn, Ann Arbor, Mich.

Drs. Herman Beerman and Bertram Shaffer, Philadelphia, and Clarence S. Livingood, Indiantown Gap, Pa., presented a paper on "Bismarsen in the Treatment of Syphilis: Review of Fourteen Years' Experience."

Drs. David Kahn and S. William Becker, Chicago, presented a paper on "The Use of Bismuth Compounds in Syphilotherapy: II. Results of Treatment of Latent Syphilis by Bismuth Compounds Combined in Part with Arsenicals."

Drs. George V. Kulchar, San Francisco, and William J. Reynolds, San Anselmo, Calif., presented a paper on "Bismuth Hepatitis: A Survey of 121 Cases."

These three papers were discussed by Drs. Frank C. Combes, New York; C. J. Lunsford, Oakland, Calif.; Harry C. Saunders, New York; John E. Dalton, Indianapolis; Bernard Appel, Lynn, Mass.; Herman Beerman, Philadelphia; S. William Becker, Chicago, and George V. Kulchar, San Francisco.

Drs. Girsch D. Astrachan and Van Alstyne H. Cornell, New York, presented a paper on "Mapharsen in the Treatment of Congenital Syphilis with Especial Consideration for the Intramuscular Method of Administration." Discussed by Drs. Norman R. Ingraham, Philadelphia; John E. Rauschkolb, Cleveland, and Girsch D. Astrachan, New York.

FRIDAY, JUNE 12—MORNING

Dr. C. Guy Lane, Boston, read the report of the Committee on Industrial Dermatoses as follows:

In the Feb. 21, 1942 edition of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION there appeared a report of the Committee on Occupational Dermatoses which was read at the meeting of the Council on Industrial Health in Chicago. This report discussed particularly the criteria of occupational dermatoses and reviewed the work of the subcommittee which had been appointed. The Committee on Teaching of Occupational Dermatoses has reviewed the questionnaires which were sent out last year which had been received from some eighty-odd medical schools and is formulating a plan of teaching based on the analysis of a large number of compensation cases.

The Committee on Primary Skin Irritants and Patch Testing is engaged in determining the threshold of irritation in a large number of primary skin irritants. It has also analyzed the questionnaires on patch testing which were sent out last year. These reports will be published shortly.

The Committee on Evaluation of Protective Chemicals and Detergents used in Industry has found it necessary to undertake the setting up of standard technics for the determination of the relative efficacy of these various applications in industry by both laboratory and clinical experiments.

The Committee on Industrial Medical Formulary is at work on a list of preparations and procedures to be used in the preparation or medical management of cutaneous exposures in industry.

The Committee on Case Reports is formulating procedures for the receiving and filing of reports on new and interesting cases.

The work of these committees is of increasing importance in view of the definite increase in occupational dermatoses with war developments. With new workers and new industries and emphasis placed on speed and the production of war materials, we must realize that there has been and probably will be an increase in occupational skin cases. Cases of contact dermatitis will need to be scrutinized more carefully for possible occupational factors, and part time and full time industrial physicians and surgeons will need to be more alertly on the watch for early manifestations in the personnel of war industries and related occupations. The early detection and adequate treatment for the purpose of keeping workmen on their jobs and of getting men and women who are incapacitated back on their jobs as soon as possible and establishment of proper preventive measures to avoid interference with production will be a very definite contribution to the war effort of the country as a whole.

Case reports are to be encouraged, particularly with regard to eruptions produced by new chemical agents, new processes, and every attempt should be made to trace the actual cause back to its original cause as accurately as possible. For all dermatologists who are teaching, the committee believes it a very practical war measure to devote somewhat more time to occupational dermatoses, even if the time allotted for dermatology in the classroom is reduced.

The committee considers it advisable to suggest a reduction in the time given to the consideration of rare and uncommon cases and even of cosmetic defects in order to emphasize the effects of trauma and injury to the skin and the industrial and military aspects of various dermatoses.

It is important that postgraduate courses for instruction in occupational aspects of skin disease be established in some of the larger centers for both dermatologists in that region and local physicians who may be participating in part time or full time industrial practice.

In such courses, emphasis should be placed on detection, therapy and prevention of most common industrial dermatoses in that particular section of the country. If there were time, consideration could well be given to the dermatitis in burns caused by agents of chemical warfare which will undoubtedly occur in centers where such materials are being produced.

The committee recommends the appointment of Dr. Louis Schwartz, Bethesda, Md., of the Office of Dermatoses Investigation, Bureau of the Public Health Service, to this committee in view of his numerous excellent contributions to this subject and his interest in this field.

The committee wishes to emphasize that more persons with skin disease due to occupational factors are being seen and will be seen in the next few years and that the members of this section can make a distinct contribution to the war effort by adequate, intelligent management of such cases.

On motion made by Dr. Marion B. Sulzberger, New York, seconded by Dr. C. Guy Lane, Boston, Dr. Louis Schwartz, Director of the Bureau of Dermatoses Investigation, U. S. Public Health Service, Bethesda, Md., was elected to the Committee on Industrial Dermatoses.

The following officers were elected: chairman, Dr. Clark W. Finnerud, Chicago; vice chairman, Dr. Frank J. Eichenlaub, Washington, D. C.; secretary, Dr. Nelson Paul Anderson, Los Angeles; delegate, Dr. Clyde L. Cummer, Cleveland; alternate, Dr. C. F. Lehmann, San Antonio, Texas; representative to Scientific Exhibit, Dr. Hamilton Montgomery, Rochester, Minn.; member of the American Board of Dermatology, Dr. Charles C. Dennis, Kansas City, Mo.

Drs. James R. Driver and Donald N. MacVicar, Cleveland, read a paper on "The Treatment of Cutaneous Melanomas." Discussed by Drs. H. Ford Anderson, Washington, D. C.; Eugene F. Traub, New York; Louis A. Brunsting, Rochester, Minn.; S. William Becker, Chicago; Alfred Hollander, Springfield, Mass.; Francis A. Ellis, Baltimore, and James R. Driver, Cleveland.

Drs. George Miller MacKee, Anthony C. Cipollaro and Arthur Mutscheller, New York, presented a paper on "Shock Proof X-Ray Apparatus in Dermatology." Discussed by Drs. C. Guy Lane, Boston; George C. Andrews, New York; Marion B. Sulzberger, New York; Arthur Mutscheller, New York; H. Ford Anderson, Washington, D. C., and Anthony C. Cipollaro, New York.

Dr. Maurice J. Costello, New York, read a paper on "Microaerophilic Streptococcus Infection Causing Destruction of the Nose." Discussed by Drs. Frank L. Meleney, New York; Louis A. Brunsting, Rochester, Minn.; Morris H. Goodman, Baltimore, and Maurice J. Costello, New York.

Drs. Erich Urbach and Donald M. Pillsbury, Philadelphia, presented a paper on "Phenomenon of Black Dermographism." Discussed by Drs. Samuel M. Peck, New York; Nelson Paul Anderson, Los Angeles; Marion B. Sulzberger, New York; Paul E. Bechet, New York, and Erich Urbach, Philadelphia.

Dr. Francis M. Thurmon, Boston, read a paper on "Hydroa Estivale: A Successful Treatment." Discussed by Drs. John H. Lamb, Oklahoma City; Clark W. Finnerud, Chicago; Theodore Cornbleet, Chicago; Wiley M. Sams, Miami, Fla.; Erich Urbach, Philadelphia; Louis A. Brunsting, Rochester, Minn.; J. Lamar Callaway, Durham, N. C., and Francis M. Thurmon, Boston.

Dr. Merlin T.-R. Maynard, San Jose, Calif., read a paper on "Thrombocyte Deficit." Discussed by Drs. Theodore Cornbleet, Chicago, and Merlin T.-R. Maynard, San Jose, Calif.

The report of Dr. Hamilton Montgomery, Rochester, Minn., the representative to the Scientific Exhibit, was read by the chairman, Dr. C. F. Lehmann.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Haven Emerson, New York.

The chairman appointed Dr. C. C. Pierce, New York, secretary pro tem.

The chairman read a letter from Dr. W. A. Sawyer, Rochester, N. Y., secretary of the section, relative to his necessary absence owing to his having been sent to England by the National Research Council for a consultation relative to industrial health.

Dr. I. C. Riggin, Richmond, Va., was appointed by the chairman to serve on the executive committee in place of Dr. Harold S. Diehl, Minneapolis, who reported that he was leaving the city.

The members of the executive committee were appointed as the nominating committee.

The chairman read the following resolution, which had already been presented to the House of Delegates by the section delegate, Dr. Stanley H. Osborn, Hartford, Conn., as follows:

WHEREAS, It is well known that there are many individuals with chronic diseases of one type or another who expect to seek medical advice, or who have been advised by their physicians to have treatment; and

WHEREAS, The early symptoms of many diseases are mild in character and many persons postpone treatment recommended by the physician; and

WHEREAS, Many thousands of physicians have gone into the armed services of the country, and tens of thousands of doctors will soon be commissioned and go to war in the future; therefore be it

Resolved, That this body recommend that all persons who expect to seek medical opinion or who have had medical or surgical care prescribed for them should seek medical advice or follow such advice while sufficient doctors remain available to the civil population.

Dr. Leopold Brahdy, New York, moved that the resolution be endorsed and presented to the House of Delegates by the section through its delegate. The motion was seconded by Dr. John A. Ferrell, New York, was put to a vote and was carried.

The chairman read the following resolution:

WHEREAS, A major inadequacy in the civilian health protection in war as in peace time consequent from the failure of many states and of not less than half the counties in the states to provide even minimum necessary sanitary and other preventive services for health by full time professionally trained medical and auxiliary personnel on a merit system basis, supported by adequate tax funds from local and state, and, where necessary, from federal sources; therefore be it

Resolved, That the Trustees of the American Medical Association be urged to use all appropriate resources and influences of the Association to the end that at the earliest possible date complete coverage of the nation's area and population by local, county, district or regional full time modern health services be achieved.

Dr. A. T. McCormack, Louisville, Ky., moved that the section recommend the resolution to the House of Delegates for adoption. The motion was seconded by Dr. John A. Ferrell, New York, and discussed favorably by Drs. John A. Ferrell, New York; A. T. McCormack, Louisville, Ky.; Stanley H. Osborn, Hartford, Conn., and Haven Emerson, New York. The motion was put to a vote and was carried.

Drs. Donald W. Cowan, Harold S. Diehl and A. B. Baker, Minneapolis, presented a paper on "Vitamins for the Prevention of Colds." Discussed by Drs. John A. Ferrell, New York; Joseph S. Lawrence, Albany, N. Y.; Haven Emerson, New York; Donald W. Cowan, Minneapolis, and Harold S. Diehl, Minneapolis.

Drs. Lemuel C. McGee, Wilmington, Del., and J. Dean Creger, Dublin, Va., presented a paper on "Gastrointestinal Disease Among Industrial Workers." Discussed by Drs. Frederick H. Shillito, New York; Stanley H. Osborn, Hartford, Conn., and Lemuel C. McGee, Wilmington, Del.

Dr. Robert T. Legge, Berkeley, Calif., read a paper on "Berkeley Plan: A Proposed Demonstration for Medical and Nursing Services in Small Plants." Discussed by Drs. John R. Paul, New Haven, Conn.; Haven Emerson, New York; Henry Pleasants Jr., West Chester, Pa., and Robert T. Legge, Berkeley, Calif.

Dr. Walter L. Bierring, Des Moines, Iowa, read a paper on "Postgraduate Education in Industrial Health." Discussed by Drs. Fred J. Wampler, Richmond, Va.; Haven Emerson, New York; John A. Ferrell, New York; Stanley H. Osborn, Hartford, Conn., and Walter L. Bierring, Des Moines, Iowa.

Dr. L. G. Rowntree, Washington, D. C., read a paper on "Rehabilitation and Prehabilitation."

THURSDAY, JUNE 11—AFTERNOON

Dr. Haven Emerson, New York, read the chairman's address, entitled "Civilian Health in War Time."

Dr. Donald K. Freedman, Washington, D. C., read a paper on "Health Problems in War Housing." Discussed by Drs. Joseph W. Mountin, Washington, D. C.; A. S. Leven, Chicago; H. R. O'Brien, Hartford, Conn.; Gradie R. Rowntree, Louisville, Ky., and Donald K. Freedman, Washington, D. C.

Dr. A. J. Aselmeyer, Washington, D. C., read a paper on "Civilian Measures for the Control of Venereal Diseases in World War II." Discussed by Drs. John H. Stokes, Philadelphia; Charles M. Carpenter, Rochester, N. Y.; N. O. Gunderson, Rockford, Ill.; Theodore Rosenthal, New York; Haven Emerson, New York; C. Walter Clarke, New York, and A. J. Aselmeyer, Washington, D. C.

Drs. William W. Frye and Alvin E. Keller, Nashville, Tenn., presented a paper on "The Hospital and the Syphilis Problem in Prospective Blood Donors." Discussed by Drs. Haven Emerson, New York; Joseph W. Mountin, Washington, D. C.; William C. Woodward, Washington, D. C.; H. R. O'Brien, Hartford, Conn., and William W. Frye, Nashville, Tenn.

FRIDAY, JUNE 12—AFTERNOON

Dr. Sidney Franklin, Newberry, Mich., was appointed secretary pro tem, Dr. Pierce having been obliged to leave the city.

The following officers were elected: chairman, Dr. Joseph W. Mountin, Washington, D. C.; vice chairman, Dr. E. L. Stebbins, New York; secretary, Dr. W. A. Sawyer, Rochester, N. Y.; executive committee: Dr. Clarence D. Selby, Detroit; Dr. Haven Emerson, New York, and Dr. Joseph W. Mountin, Washington, D. C.; delegate, Dr. Stanley H. Osborn, Hartford, Conn.; alternate, Dr. L. D. Bristol, New York; chairman, Committee on Section Exhibit, Dr. Paul Arthur Davis, Akron, Ohio.

Dr. Stanley H. Osborn, Hartford, Conn., made the report of the section delegate to the House of Delegates. Dr. Joseph W. Mountin, Washington, D. C., moved, and the motion was seconded by Dr. Clarence D. Selby, Detroit, that it be recorded that it is the belief of the section that the rights and privileges of section delegates should not be abrogated.

Dr. R. S. Goodhart, Forest Hills, N. Y., read a paper on "Nutrition in Industry." Discussed by Dr. Norman H. Jolliffe, New York.

Dr. Paul E. Howe, Washington, D. C., read a paper on "Nutritional Aspects of Feeding an Army." Discussed by Drs. Joseph W. Mountin, Washington, D. C.; J. D. Leake, Washington, D. C., and Paul E. Howe, Washington, D. C.

Dr. E. W. Brown, Washington, D. C., read a paper on "Nutritional Aspects of Feeding in the U. S. Navy." Discussed by Dr. Paul E. Howe, Washington, D. C.

Dr. Howard W. Haggard, New Haven, Conn., read a paper on "Supplementary Feeding in Industry." Discussed by Drs. C. F. Yeager, Bridgeport, Conn.; J. D. Leake, Washington, D. C., and Paul E. Howe, Washington, D. C.

SECTION ON UROLOGY

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2:10 by the chairman, Dr. Vincent J. O'Conor, Chicago.

Dr. A. E. Goldstein, Baltimore, read a paper on "Pathologic Conditions Encountered in Horseshoe Kidney." Discussed by Drs. Henry Sangree, Philadelphia; Victor D. Lespinasse, Chicago, and A. E. Goldstein, Baltimore. A motion picture was shown by Dr. Franklin Farman, Los Angeles.

Dr. W. Calhoun Stirling, Washington, D. C., read a paper on "Resection of Kidney." Discussed by Drs. George C. Prather, Boston; Meredith F. Campbell, New York, and W. Calhoun Stirling, Washington, D. C.

Dr. Herman L. Kretschmer, Chicago, read a paper on "Life After Nephrectomy." Discussed by Drs. Monroe E. Greenberger, New York; Stanley R. Woodruff, Jersey City, N. J., and Herman L. Kretschmer, Chicago.

Dr. Hugh J. Jewett, Baltimore, read a paper on "Does Vitamin A Deficiency Exist in Clinical Urolithiasis? Studies Based on Clinical and Pathologic Material." Discussed by Drs. David M. Davis, Philadelphia; Rubin Flocks, Iowa City, and Hugh J. Jewett, Baltimore.

Drs. A. I. Folsom and H. A. O'Brien, Dallas, Texas, presented a paper on "The Female Obstructing Prostate." Discussed by Drs. Nelse F. Ockerblad, Kansas City, Mo.; Reed M. Nesbit, Ann Arbor, Mich.; Herman L. Kretschmer, Chicago; Vincent J. O'Conor, Chicago, and A. I. Folsom, Dallas, Texas.

Dr. W. E. Forsythe Jr., New York, read a paper on "The Urethrogram as an Aid in Diagnosis of Prostatic Abscess." Discussed by Drs. Roy B. Henline, New York; H. C. Bumpus Jr., Pasadena, Calif., and W. E. Forsythe Jr., New York.

THURSDAY, JUNE 11—AFTERNOON

Dr. Vincent J. O'Conor, Chicago, read the chairman's address, entitled "Indications and Prognosis in Unilateral Nephrectomy."

Dr. Jorge Cavelier, Bogota, Colombia, read a paper entitled "Syphilis of the Bladder."

Drs. Oswald S. Lowsley and Edward M. Cannon, New York, presented a paper entitled "Aneurysm of the Renal Artery." Discussed by Drs. Herbert H. Howard, Boston; O. A. Nelson, Seattle; Victor D. Lespinasse, Chicago, and Oswald S. Lowsley, New York.

Dr. B. S. Barringer, New York, read a paper on "Five Year Results of Carcinoma of the Bladder Treated by Radium." Discussed by Drs. George G. Smith, Brookline, Mass., and B. S. Barringer, New York.

Dr. F. M. Allen, New York, read a paper on "Renal-Vascular Disorders: Experimental and Therapeutic Developments." Discussed by Drs. Arbor D. Munger, Lincoln, Neb., and F. M. Allen, New York.

FRIDAY—JUNE 12

Dr. Grayson L. Carroll, St. Louis, read the report of Dr. Alfred I. Folsom, Dallas, Texas, of the American Board of Urology, Inc. On motion regularly made and seconded the report was received.

The following officers were elected: chairman, Dr. Gershom J. Thompson, Rochester, Minn.; vice chairman, Dr. Arthur D. Munger, Lincoln, Neb.; secretary, Dr. Grayson L. Carroll, St. Louis.

The resignation of Dr. H. C. Bumpus Jr., Pasadena, Calif., delegate, was accepted and Dr. Roy B. Henline, New York, was elected to fill his unexpired term.

The following papers were read as a symposium on "Treatment of Carcinoma of the Prostate Gland":

Dr. Gershom J. Thompson, Rochester, Minn.: "Transurethral Resection of the Malignant Prostate Gland."

Dr. William P. Herbst, Washington, D. C.: "A Preliminary Report of Biochemical Therapeusis in Carcinoma of the Prostate Gland."

Dr. Alexander B. Gutman, New York: "The Serum Acid Phosphatase in Prostate Gland Carcinoma."

Dr. Edwin P. Alyea, Durham, N. C.: "Castration for Carcinoma of the Prostate Gland."

Dr. Charles D. Creevy, Minneapolis: "The Diagnosis and Treatment of Carcinoma of the Prostate Gland."

Drs. Reed M. Nesbit and Robert H. Cummings, Ann Arbor, Mich.: "Orchiectomy in Treatment of Prostatic Carcinoma: A Report of Seventy-Five Cases Followed Six Months or More After Operation."

These six papers were discussed by Drs. Arbor D. Munger, Lincoln, Neb.; H. C. Bumpus Jr., Pasadena, Calif.; Walter M. Kearns, Milwaukee; Clyde W. Collings, Pasadena, Calif.; Vincent Vermooten, New Haven, Conn.; William P. Herbst, Washington, D. C.; Charles D. Creevy, Minneapolis, and Reed M. Nesbit, Ann Arbor, Mich.

Dr. Elmer Hess, Erie, Pa., showed a motion picture of his castration operation.

SECTION ON RADIOLOGY

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9:15 by the chariman, Dr. Ralph S. Bromer, Bryn Mawr, Pa.

Dr. Israel Steinberg, New York, read a paper on "The Value of Contrast Roentgenography of the Cardiovascular Structures in the Differentiation of Mediastinal Tumor and Aneurysm."

Dr. O. A. Nelson, Seattle, read a paper on "Arteriography for Renoabdominal Diagnosis."

Drs. Henry K. Taylor and Teresa McGovern, New York, presented a paper on "Evaluation of Angiocardiography."

These three papers were discussed by Drs. M. F. Steinberg, New York; Merrill C. Sossman, Boston; O. A. Nelson, Seattle, and Henry K. Taylor, New York.

Dr. Ralph S. Bromer, Bryn Mawr, Pa., read the chairman's address, entitled "The Role of the Roentgenologist in the Diagnosis of Congenital Cardiac Lesions."

Drs. Marcy L. Sussman and Emanuel Wachtel, New York, presented a paper on "Factors Concerned in the Abnormal Distribution of Barium in the Small Bowel."

THURSDAY, JUNE 11—MORNING

The following officers were elected: chairman, Dr. Robert A. Arens, Chicago; vice chairman, Dr. Edwin C. Ernst, St. Louis; secretary, Dr. John T. Murphy, Toledo, Ohio; executive committee: Dr. Raymond C. Beeler, Indianapolis; Dr. Ralph S. Bromer, Bryn Mawr, Pa., and Dr. Robert A. Arens, Chicago; delegate, Dr. Edward H. Skinner, Kansas City, Mo.; alternate, Dr. E. P. Pendergrass, Philadelphia; delegate to American Board of Radiology, Dr. Lyell C. Kinney, San Diego, Calif.

Dr. Karl Kornblum, Philadelphia, read a paper entitled "A Plea for the Prevention of Bronchiectasis." Discussed by Drs. John T. Farrell Jr., Philadelphia; Louis H. Clerf, Philadelphia, and Karl Kornblum, Philadelphia.

Drs. Geza de Takats, G. K. Fenn and Edward L. Jenkinson, Chicago, presented a paper on "Bronchial Obstruction in Pulmonary Embolism." Discussed by Drs. Louis H. Clerf, Philadelphia, and G. K. Fenn, Chicago.

Drs. Roscoe W. Teahan, Hoke Wammock and James L. Weatherwax, Philadelphia, presented a paper on "Treatment of Carcinoma of the Cervix by Interstitial Radiation." Discussed by Drs. A. N. Arneson, St. Louis; John J. Gilbride, Philadelphia; Misch Casper, Louisville, Ky., and Roscoe W. Teahan, Philadelphia.

Dr. Milton Friedman, New York, read a paper on "Insertion of Radium into the Uterus and Vagina." Discussed by Drs. Edith H. Quimby, New York; Charles L. Martin, Dallas, Texas, and Milton Friedman, New York.

Drs. J. Dewey Bisgard, Howard B. Hunt and Orvis A. Neely, Omaha, presented a paper on "Experimental Studies of the Mechanism of Action of Roentgen Therapy on Infection." Discussed by Drs. James F. Kelly, Omaha; John S. Lockwood, Philadelphia, and J. Dewey Bisgard, Omaha.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Obstetrics and Gynecology.

Dr. Willard M. Allen, St. Louis, read a paper on "Excessive Menstrual Bleeding in Adolescent Girls."

Dr. Ira I. Kaplan, New York, read a paper on "Splenic and Pituitary Irradiation for the Control of Puberal Bleeding."

Dr. Clarence Cook Little, Bar Harbor, Maine, read a paper on "The Effect of Radiation on Germ Cells."

Dr. Conrad G. Collins, New Orleans, read a paper on "Excessive Bleeding at the Menopause or Associated with Myoma."

In the absence of two members of the executive committee, Dr. N. W. Furey, Gaylord, Mich., and Dr. Joseph England Roberts Jr., Camden, N. J., were appointed temporary members.

These four papers were discussed by Drs. V. S. Counseller, Rochester, Minn.; Lewis C. Scheffey, Philadelphia; Ramsay Spillman, New York; George H. Gardner, Chicago; Richard W. TeLinde, Baltimore; John T. Murphy, Toledo, Ohio; Willard M. Allen, St. Louis; Ira I. Kaplan, New York; Clarence Cook Little, Bar Harbor, Maine, and Conrad G. Collins, New Orleans.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

WEDNESDAY, JUNE 10—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Walter L. Palmer, Chicago.

Drs. A. J. Atkinson, H. F. Adler and A. C. Ivy, Chicago, presented a paper on "Motility of the Human Colon: The Normal Pattern, Dyskinesia and Effect of Drugs." Discussed by Drs. Walter C. Alvarez, Rochester, Minn.; John P. Quigley, Cleveland; James W. Wiltsie, Binghamton, N. Y., and A. J. Atkinson, Chicago.

Drs. Malcolm R. Hill, Los Angeles; E. Harold Shryock, Loma Linda, Calif., and F. George ReBell, Los Angeles, presented a paper on "The Role of the Anal Glands in the Pathogenesis of Anorectal Disease." Discussed by Drs. Robert A. Scarborough, San Francisco; Claude C. Tucker, Wichita, Kan., and Malcolm R. Hill, Los Angeles.

Dr. Thomas E. Smith, Dallas, Texas, read a paper on "Primary Lymphoid Tumors of the Rectum Resembling Internal Hemorrhoids." Discussed by Drs. Curtice Rosser, Dallas, Texas; Simon B. Kleiner, New Haven, Conn.; Claude C. Tucker, Wichita, Kan., and Thomas E. Smith, Dallas, Texas.

Dr. C. C. Mechling, Pittsburgh, read a paper on "Anesthesia Used in Proctology." Discussed by Drs. Louis J. Hirschman, Detroit; John J. Corbett, Detroit; Curtice J. Rosser, Dallas, Texas, and C. C. Mechling, Pittsburgh.

Drs. W. Wayne Babcock and Harry E. Bacon, Philadelphia, presented a paper on "Operative Treatment of Cancer of the Rectum and Sigmoid Without Colostomy." Discussed by Drs. Louis J. Hirschman, Detroit; Frank H. Lahey, Boston, and W. Wayne Babcock, Philadelphia.

Dr. Joseph Felsen, New York, read a paper on "The Infectious Diarrheas, Enteritis and Colitis."

Drs. Z. Bercovitz and R. C. Page, New York, presented a paper on "Metabolic and Vitamin Studies in Chronic Ulcerative Colitis."

These two papers were discussed by Drs. J. A. Bargen, Rochester, Minn.; Manfred Kraemer, Newark, N. J.; A. Trasoff, Philadelphia; Moses Paulson, Baltimore; Joseph Felsen, New York, and Z. Bercovitz, New York.

Dr. E. Parker Hayden, Boston, read a paper on "Inflammatory Stenosing Lesions of the Colon."

Dr. Raymond J. Jackman, Rochester, Minn., read a paper on "Diverticula of the Colon: Proctoscopy as an Aid in the Diagnosis and Differential Diagnosis." Discussed by Drs. Johannes Pessel, Trenton, N. J.; John C. M. Brust, Syracuse, N. Y.; Louis A. Buie, Rochester, Minn., and Raymond J. Jackman, Rochester, Minn.

THURSDAY, JUNE 11—MORNING

Dr. A. F. R. Andresen, Brooklyn, reported for the committee appointed in 1940 to cooperate with the American Board of Internal Medicine in the certification of specialists in gastroenterology. He stated that any one interested in being certified in internal medicine and gastroenterology should write to Dr. William S. Middleton, 1301 University Avenue, Madison, Wis., for information.

Dr. Andresen read the following resolution and moved its adoption:

WHEREAS, At a special meeting of the American Board of Internal Medicine on June 4, 1942 the board, in an effort to avoid the appearance of a monopoly, unanimously agreed to invite the Section on Gastro-Enterology and Proctology to nominate a panel of five of its members from whom the board might choose one representative of the section on its Advisory Committee on Gastro-Enterology; therefore be it

Resolved, That the executive committee of the section, acting as a nominating committee, be asked to present five names for such a panel, to be elected by the section at its regular meeting on June 12, 1942.

Dr. John L. Kantor, New York, seconded the motion, which was put to a vote and was carried.

Dr. Louis A. Buie, Rochester, Minn., made a report as the section's delegate to the House of Delegates, reading the Report of the Judicial Council to the members of the House of Delegates at its meeting Monday morning, June 8, 1942 and stating that this report was referred to the Committee on Sections and Section Work, and that thus far that committee had not made a report to the House of Delegates.

Dr. A. H. Aaron, Buffalo, moved, and Dr. John L. Kantor, New York, seconded, that the section approve Dr. Buie's report, and that it be recorded as the sense of the section that the present privileges of sectional delegates should not be abrogated. The motion was put to a vote and was carried.

The following officers were elected: chairman, Dr. Emmett H. Terrell, Richmond, Va.; vice chairman, Dr. J. Arnold Bargen, Rochester, Minn.; secretary, Dr. Sara M. Jordan, Boston; executive committee: Dr. Frank C. Yeomans, New York; Dr. Walter L. Palmer, Chicago, and Dr. Emmett H. Terrell, Richmond, Va.; alternate delegate, Dr. Walter A. Fansler, Minneapolis; chairman of Scientific Exhibit Committee, Dr. Grant H. Laing, Chicago; member of Certifying Committee, Board of Proctology, Dr. Frank G. Runyeon, Reading, Pa.; five names to be submitted to the Board of Internal Medicine, from whom one is to be chosen to represent the section on the Certifying Board for Gastroenterology: Dr. Anthony Bassler, New York; Dr. Reuben Finkelstein, Brooklyn; Dr. John H. Fitzgibbon, Portland, Ore.; Dr. Walter L. Palmer, Chicago, and Dr. Adolph Sachs, Omaha.

Dr. Walter L. Palmer, Chicago, read the chairman's address, entitled "The Stomach and Military Service."

Dr. John L. Kantor, New York, read a paper on "Digestive Disease and Military Service, with Special Reference to the Medical Department of the United States Army." Discussed by Drs. C. R. Reynolds, Harrisburg, Pa.; Donald T. Chamberlin, Atlanta, Ga.; Henry M. Thomas Jr., Fort George G. Meade, Maryland; J. Edward Berk, Fort Dix, New Jersey; Rudolf Schindler, Chicago; Hyman I. Goldstein, Camden, N. J., and John L. Kantor, New York.

The following papers were read in a Panel Discussion on Ulcer, during which Dr. A. H. Aaron, Buffalo, presided:

Dr. B. R. Kirklin, Rochester, Minn.: "Ulcerating Lesions of the Stomach."

Dr. Jacob Earl Thomas, Philadelphia: "The Modern Conception of Gastric Secretion."

Drs. Samuel Morrison and Maurice Feldman, Baltimore: "Psychomatic Correlations of Duodenal Ulcer: A Statistical Study."

Drs. Harry Shay, J. Gershon-Cohen and Samuel S. Fels, Philadelphia: "The Physiologic Basis for the Dietotherapy in Duodenal Ulcer."

Drs. Asher Winkelstein, Albert Cornell and Franklin Hollander, New York: "An Evaluation of the Continuous Intragastric Drip Therapy."

Dr. John M. Blackford, Seattle: "Fatal Hemorrhage from Peptic Ulcer."

Drs. Jacob Meyer and Heinrich Necheles, Chicago: "A Critical Evaluation of the Factor of Age in the Conservative and Surgical Treatment of Bleeding Peptic Ulcer."

Dr. V. C. Rowland, Cleveland: "Treatment of Obstructive Juxtapyloric Ulcer: Combined Use of Aluminum Hydroxide Drip and Wangensteen Aspirator."

Drs. J. William Hinton, New York: "The Selection of Operation for Patients with Gastric and Duodenal Ulcers."

Dr. Everett D. Kiefer, Boston: "Jejunal Ulcers and Recurrent Hemorrhages After Partial and Subtotal Gastrectomy for Peptic Ulcer."

A question period followed these presentations.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Pathology and Physiology.

The following papers were read in a symposium on "Liver," during which Dr. J. P. Simonds, Chicago, presided:

Dr. Frank C. Mann, Rochester, Minn.: "The Gastrointestinal Tract and the Liver."

Dr. John G. Mateer, Detroit: "Liver Function Tests."

Drs. Thomas A. Johnson and Henry L. Bockus, Philadelphia: "The Significance of Mild Hyperbilirubinemia in Gastrointestinal Patients."

Dr. Sidney A. Portis, Chicago: "The Clinical Prevention and Diagnosis of Liver Dysfunction."

Dr. Virgil H. Moon, Philadelphia: "The Histogenesis of Hepatic Cirrhosis."

Drs. Dwight L. Wilbur, David A. Wood and Forrest M. Willett, San Francisco: "Primary Carcinoma of the Liver."

Dr. Charles Gordon Heyd, New York: "The Concept of Liver Deaths."

These seven papers were discussed by Drs. Chester M. Jones, Boston; J. P. Simonds, Chicago; Henry A. Rafsky, New York; Moses Paulson, Baltimore; Frank C. Mann, Rochester, Minn.; John G. Mateer, Detroit; Thomas A. Johnson, Philadelphia; Sidney A. Portis, Chicago; Dwight L. Wilbur, San Francisco, and Virgil H. Moon, Philadelphia.

The following papers were read in a symposium on "Gastritis," during which Dr. Walter L. Palmer, Chicago, presided:

Dr. Edward B. Benedict, Boston: "Correlation of Gastroscopic and Pathologic Findings in Gastritis."

Dr. Julian M. Ruffin, Durham, N. C.: "The Significance of Hemorrhagic or Pigment Spots as Observed by Gastroscopy."

Dr. C. Wilmer Wirts, Philadelphia: "The Early Diagnosis of Carcinoma of the Stomach."

Drs. I. R. Jankelson and C. W. McClure, Boston, and Harry Freedberg, Salem, Mass.: "Relation of Atrophic Gastric Mucosa to Carcinoma of the Stomach."

Drs. J. B. Carey and R. S. Ylvisaker, Minneapolis: "Gastroscopic Observation in Duodenal Ulcer."

These five papers were discussed by Drs. Shields Warren, Boston; Rudolf Schindler, Chicago; Leonidas H. Berry, Chicago; Leo L. J. Hardt, Chicago; Henry A. Rafsky, New York; A. A. Goldsmith, Chicago; James Patejdl, Chicago; Edward B. Benedict, Boston; Julian M. Ruffin, Durham, N. C.; I. R Jankelson, Boston, and J. B. Carey, Minneapolis.

SECTION ON ANESTHESIOLOGY

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Thomas J. Collier, Atlanta, Ga.

Dr. Thomas J. Collier, Atlanta, Ga., read the chairman's address, entitled "Crawford W. Long, 1815-1878."

Dr. E. M. Papper, New York, read a paper on "Circulatory Changes During Spinal Anesthesia." Discussed by Drs. Sidney C. Wiggin, Boston; Stuart C. Cullen, Iowa City; Henry K. Beecher, Boston, and E. M. Papper, New York.

Dr. Leo V. Hand, Boston, read a paper on "Spinal Anesthesia: Factors Influencing Its Success." Discussed by Drs. Rolland J. Whitacre, East Cleveland, Ohio; Virginia Apgar, New York; F. Elmore Hubbard, Montclair, N. J.; George C. Moore, Boston, and Leo V. Hand, Boston.

Dr. Paul M. Wood, New York, read a paper on "Rectal Anesthesia in Surgical and Obstetric Procedures." Discussed by Drs. Wesley Bourne, Westmount, Que.; H. Boyd Stewart, Tulsa, Okla.; John H. Hutton, Portland, Ore., and Paul M. Wood, New York.

Dr. Franklin F. Snyder, Chicago, read a paper on "Morphine in Obstetric Analgesia." Discussed by Drs. Douglas P. Murphy, Philadelphia; Newlin F. Paxson, Philadelphia; David I. Macht, Baltimore, and Franklin F. Snyder, Chicago.

THURSDAY, JUNE 11—AFTERNOON

Dr. Wesley Bourne, Westmount, Que., read a paper on "Interdependence of Function in Anesthesia." Discussed by Drs. Ralph M. Waters, Madison, Wis.; Ralph M. Tovell, Hartford, Conn., and Wesley Bourne, Westmount, Que.

Drs. H. F. Bishop, Washington, D. C., and Fred F. Rudder, Atlanta, Ga., presented a paper on "Intravenous Anesthesia." Discussed by Drs. J. Roy Fulton, Philadelphia; Robert A. Hingson, Stapleton, Staten Island, N. Y.; Fred F. Rudder, Atlanta, Ga., and H. F. Bishop, Washington, D. C.

Dr. Douglas B. Kendrick Jr., Washington, D. C., read a paper on "The Prevention and Treatment of Shock During Surgical Procedures." Discussed by Drs. Henry K. Beecher, Boston, and Douglas B. Kendrick, Washington, D. C.

Dr. Stevens J. Martin, Fort Dix, New Jersey, read a paper on "The Teaching of Anesthesiology in the Army." Discussed by Drs. Henry S. Ruth, Merion Station, Pa.; Sidney C. Wiggin, Boston, and Stevens J. Martin, Fort Dix, New Jersey.

Dr. K. C. McCarthy, Toledo, Ohio, read a paper on "Casualty Anesthesia in England." Discussed by Drs. A. L. Tynes, Washington, D. C.; S. LeRoy Sahler, Rochester, N. Y., and K. C. McCarthy, Toledo, Ohio.

FRIDAY, JUNE 12—AFTERNOON

Dr. Henry S. Ruth, Merion Station, Pa., delegate to the House of Delegates, presented his report.

The Secretary, Dr. John S. Lundy, Rochester, Minn., read a communication from the American Board of Anesthesiology containing an amendment to section 2, article III, of the constitution of the board. On motion of Dr. Ralph M. Waters, Madison, Wis., seconded by Dr. Paul M. Wood, New York, the amendment was adopted as read, approving the change from three to four representatives on the board.

Dr. Henry S. Ruth, Merion Station, Pa., and Dr. Paul M. Wood, New York, were elected delegates to the American Board of Anesthesiology for a period of six years.

The secretary read a communication from Dr. Paul M. Wood, New York, American Board of Anesthesiology, requesting that the Section on Anesthesiology of the American Medical Association urge the inclusion of one or more anesthetists on the Council on Pharmacy and Chemistry of the American Medical Association. It was moved by Dr. Henry S. Ruth, Merion Station, Pa., seconded by Dr. M. H. Krakow, New York, and voted that the section support Dr. Wood's suggestion.

The following officers were elected: chairman, Dr. Paul M. Wood, New York; vice chairman, Dr. William Wilson Hutchinson, Los Angeles; secretary, Dr. John S. Lundy, Rochester, Minn.; executive committee: Dr. Ralph M. Waters, Madison, Wis.; Dr. Thomas J. Collier, Atlanta, Ga., and Dr. Paul M. Wood, New York; delegate, Dr. Henry S. Ruth, Merion Station, Pa.; alternate, Dr. C. F. McCuskey, Los Angeles.

Dr. C. L. Burstein, New York, read a paper on "Laboratory and Clinical Studies with Paraldehyde." Discussed by Drs. Ralph T. Knight, Minneapolis, and C. L. Burstein, New York.

Dr. Robert D. Dripps Jr., Philadelphia, read a paper on "The Balance Between Central and Reflex Control of Respiration." Discussed by Drs. Carl F. Schmidt, Philadelphia; F. Elmore Hubbard, Montclair, N. J., and Robert D. Dripps Jr., Philadelphia.

Drs. Herbert W. Schmidt and Lloyd H. Mousel, Rochester, Minn., presented a paper on "Postoperative Bronchoscopy." Discussed by Drs. Philip D. Woodbridge, New Haven, Conn.; Alfred Habeeb, Fairfield, Ala.; Leo V. Hand, Boston, and Herbert W. Schmidt, Rochester, Minn.

Dr. John Adriani, New Orleans, read a paper on "Effect of Anesthetics on Bronchial Tissues." Discussed by Drs. Donald E. Brace, Woodside, N. Y.; Douglass H. Batten, Brooklyn, and John Adriani, New Orleans.

Dr. Richard von Foregger Jr., Madison, Wis., read a paper on "Surface Temperature Under Anesthesia."

SECTION ON MISCELLANEOUS TOPICS

Sessions on General Practice

WEDNESDAY, JUNE 10—MORNING

The first session on General Practice was called to order at 9:05 by the chairman, Dr. Lucien Stark, Norfolk, Neb.

Dr. Lucien Stark, Norfolk, Neb., read the chairman's address.

Dr. George M. Cook, Hammond, Ind., read a paper on "Cardiology in General Practice."

Dr. Tinsley R. Harrison, Winston-Salem, N. C., read a paper on "Some Puzzling Aspects of Pain in the Chest." Discussed by Drs. Ferdinand F. Schwartz, Painesville, Ohio; Henry M. Thomas Jr., Fort George G. Meade; Maryland; Wingate M. Johnson, Winston-Salem, N. C.; Clark W. Day, Indianapolis; Emilio Leopold Hergert, Brooklyn; F. M. Pottenger, Monrovia, Calif.; Meyer Golob, New York, and Tinsley R. Harrison, Winston-Salem, N. C.

Dr. H. W. Rathe, Waverly, Iowa, read a paper on "Myocardial Infarction: Clinical Features and Prognosis." Discussed by Drs. Horace M. Korns, Iowa City, and O. P. J. Falk, St. Louis.

Dr. Hugh P. Greeley, Madison, Wis., read a paper on "Blood Pressure After Thirty Years." Discussed by Dr. Karl H. Doege, Marshfield, Wis.

Dr. J. J. Eller, New York, read a paper on "Vitamins in Dermatology, Including Gray Hair Therapy." Discussed by Drs. Carroll S. Wright, Philadelphia; Benjamin F. Sieve, Boston; Paul Gross, New York; Arthur D. Woods, State Center, Iowa; Abraham E. Jaffin, Jersey City, N. J., and J. J. Eller, New York.

THURSDAY, JUNE 11—MORNING

Dr. Arch Walls, Detroit, read a paper on "Menopausal Symptoms and Their Treatment." Discussed by Drs. William J. Carrington, Atlantic City, N. J.; A. R. Abarbanel, Baltimore, and Arch Walls, Detroit.

Dr. Elliott B. Edie, Uniontown, Pa., read a paper on "The Management of Patients with Anxiety." Discussed by Drs. Edward Weiss, Philadelphia; Belle E. Jacobson, New Rochelle, N. Y., and Joseph A. Pettit, Portland, Ore.

Dr. Walter C. Alvarez, Rochester, Minn., read a paper on "What Causes Gas?" Discussed by Drs. Burrill B. Crohn, New York; Edward Weiss, Philadelphia; James M. Northington, Charlotte, N. C., and Walter C. Alvarez, Rochester, Minn.

Dr. C. W. McGavran, Columbus, Ohio, read a paper on "The So-Called Mucous Colitis or Spastic Irritable Colon." Discussed by Drs. Walter C. Alvarez, Rochester, Minn.; William Cole Davis, Atlantic City, N. J.; Myer Solis-Cohen, Philadelphia, and C. W. McGavran, Columbus, Ohio.

Dr. M. W. Thewlis, Wakefield, R. I., read a paper on "The Care of the Aged." Discussed by Drs. Lucien Stark, Norfolk, Neb.; Wingate M. Johnson, Winston-Salem, N. C.; George M. Levitas, Westwood, N. J., and M. W. Thewlis, Wakefield, R. I.

Dr. C. T. Stone, Galveston, Texas, read a paper on "The Modern Treatment of Pneumonia." Discussed by Dr. George M. Piersol, Philadelphia.

Session on Legal Medicine

FRIDAY, JUNE 12—MORNING

The meeting was called to order at 9:17 by the chairman, Dr. William C. Woodward, Washington, D. C.

Dr. Edmund M. Morgan, Cambridge, Mass., read a paper on "Privileged Communications: Law versus Ethics."

Dr. Hubert W. Smith, Cambridge, Mass., read a paper on "Legal Responsibility for Negligent Diagnosis."

Dr. Raimundo de Castro, Havana, Cuba, read a paper on "Human Postmortem Changes in the Tropics and Their Medicolegal Significance."

Dr. Harrison S. Martland, Newark, N. J., read a paper on "The Importance of Performing Autopsies on the Bodies of Persons Apparently Dead by Suicide." Discussed by Dr. Alan R. Moritz, Boston.

Dr. Samuel R. Gerber, Cleveland, read a paper on "The Advantage of the Coroner System Over That of the Medical Examiner."

Dr. Timothy Leary, Boston, read a paper on "The Advantage of the Medical Examiner System Over That of the Coroner."

These two papers were discussed by Drs. Haven Emerson, New York; Theodore J. Corphey, Garden City, N. Y.; L. M. Snyder, Lansing, Mich.; Alfred Angrist, Jamaica, Long Island, N. Y.; Hubert Winston Smith, Cambridge, Mass.; Samuel R. Gerber, Cleveland, and Timothy Leary, Boston.

SECTION ON ORTHOPEDIC SURGERY

WEDNESDAY, JUNE 10—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. James A. Dickson, Cleveland.

Dr. John G. Kuhns, Boston, read a paper on "Congenital Flat Foot." Discussed by Drs. Paul W. Lapidus, New York; Guy A. Caldwell, New Orleans, and John G. Kuhns, Boston.

Dr. C. Glenn Barber, Cleveland, read a paper on "Osteochondrosis Deformans Tibiae: A Type of Developing Nonrachitic Bowlegs in Children." Discussed by Drs. Luthero Vargas, Rio de Janeiro, Brazil; Walter P. Blount, Milwaukee; H. A. Swart, Charleston, W. Va.; I. William Nachlas, Baltimore, and C. Glenn Barber, Cleveland.

Dr. Allan D. Wallis, Philadelphia, read a paper on "Odor in the Orr Treatment of Osteomyelitis and Its Prevention by Lactose." Discussed by Drs. Fritz Teal Jr., Lincoln, Neb.; Lenox D. Baker, Durham, N. C., and Allan D. Wallis, Philadelphia.

The following nominating committee was appointed: chairman, Robert D. Schrock, Omaha; Vernon P. Thompson, Los Angeles, and John G. Kuhns, Boston.

Dr. Alberto Inclan, Havana, Cuba, read a paper on "Tumoral Calcinosis." Discussed by Drs. Robert D. Schrock, Omaha; Ralph K. Ghormley, Rochester, Minn., and Alberto Inclan, Havana, Cuba.

Dr. A. Bruce Gill, Philadelphia, read a paper on "Suggestions for Improvements in the Program for the Public Care of the Crippled Child." Discussed by Dr. Allen F. Voshell, Baltimore.

Dr. Earl D. McBride, Oklahoma City, read a paper on "Plated Osteoperiosteal Graft." Discussed by Drs. Leo S. Lucas, Portland, Ore.; Rexford L. Diveley, Kansas City, Mo., and Earl D. McBride, Oklahoma City.

THURSDAY, JUNE 11—AFTERNOON

The following officers were elected: chairman, Guy A. Caldwell, New Orleans; vice chairman, Theodore A. Willis, Cleveland; secretary, Francis M. McKeever, Los Angeles; executive committee: J. Albert Key, St. Louis; James A. Dickson, Cleveland, and Guy A. Caldwell, New Orleans; suggestions to American Board of Orthopedic Surgery: (1) Ralph K. Ghormley, Rochester, Minn.; (2) Robert W. Johnson, Baltimore; delegate, James Archer O'Reilly, St. Louis; alternate, J. E. M. Thomson, Lincoln, Neb.

Dr. James Archer O'Reilly, St. Louis, gave a report as delegate to the House of Delegates.

On motion by Dr. Rexford L. Diveley, Kansas City, Mo., it was voted that a committee be formed to study and evaluate the Kenny treatment of infantile paralysis, this committee to be composed of six members, two to be appointed by the chairman of the Section on Orthopedic Surgery of the American Medical Association, two members to be appointed by the president of the Academy of Orthopedic Surgeons and two members to be appointed by the president of the American Orthopedic Association, this committee to study and evaluate the Kenny treatment of infantile paralysis, the report to be published either in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION or the *Journal of Bone and Joint Surgery*, and the respective members to report to their respective organizations as soon as is practical and possible.

Dr. C. E. Irwin, Warm Springs, Ga., read a paper on "Genu Recurvatum Following Poliomyelitis: A Controlled Method of Operative Correction." Discussed by Drs. Harold B. Boyd, Memphis, Tenn.; A. Bruce Gill, Philadelphia; H. R. McCarroll, St. Louis, and C. E. Irwin, Warm Springs, Ga.

Dr. James A. Dickson, Cleveland, read the chairman's address, entitled "Orthopedic Surgery Between Two Wars."

Dr. C. Howard Hatcher, Chicago, read a paper on "Localized Fibrous Lesions of the Long Bones." Discussed by Drs. Robert D. Schrock, Omaha; Henry L. Jaffe, New York, and C. Howard Hatcher, Chicago.

Dr. Norman T. Kirk, Washington, D. C., read a paper on "Amputations in War." Discussed by Drs. Vernon P. Thompson, Los Angeles; Lyman W. Crossman, New York; Edwin W. Ryerson, Chicago, and Norman T. Kirk, Washington, D. C.

Dr. Perrin H. Long, Baltimore, read a paper on "Systemic and Local Sulfonamide Therapy of War Wounds." Discussed by Drs. John E. Cannaday, Charleston, W. Va.; Philip Lewin, Chicago, and Perrin H. Long, Baltimore.

Dr. J. A. MacFarlane, Toronto, Ont., read a paper on "Management of Wounds of the Extremities in Modern Warfare."

Dr. Fowler B. Roberts, Akron, Ohio, read a paper on "Shelf Operation for Dislocated Hips: Especially Useful in Younger Children." Discussed by Drs. David M. Bosworth, New York, and Fowler B. Roberts, Akron, Ohio.

FRIDAY, JUNE 12—MORNING

A joint meeting was held with the Section on Nervous and Mental Diseases. The proceedings are reported in the minutes of that section.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

ALABAMA

State Medical Election.—Dr. Harvey B. Searcy, Tuscaloosa, was elected president of the Medical Association of the State of Alabama at its recent annual session, succeeding Dr. James M. Mason, Birmingham. Dr. James O. Morgan, Gadsden, was elected vice president from the northeastern area.

Society News.—The northwestern division of the state medical association was addressed in Haleyville, May 27, by the following: Drs. James S. McLester, Birmingham, "Nutrition and Fighting the War"; Courtney W. Shropshire, Birmingham, "Rapid Treatment of Early Syphilis with Multiple Injections of Mapharsen"; John E. Garrison, Birmingham, "Delivering Babies at Home"; Lieut. Col. George A. O'Connell, Fort McClellan, Anniston, "Hospitals in the Zone of the Interior," and Major Gerald G. Woodruff, Fort McClellan, "Need for Doctors in the Medical Corps."

CALIFORNIA

Dr. Reed Joins Stanford Faculty.—Dr. Alfred C. Reed, since 1928 professor of tropical medicine, University of California Medical School, San Francisco, has resigned to become associate clinical professor of medicine at Stanford University School of Medicine, San Francisco, according to *Science*. Dr. Reed served on the Stanford faculty from 1916 to 1928. A graduate of New York University College of Medicine, New York, class of 1910, he has specialized in tropical medicine for many years. He was president of the American Society for Tropical Medicine in 1938.

Increase in Births.—The state department of health reports that 125,050 births were registered in 1941 as compared with 111,840 in 1940. All counties of the state contributed to the increase with the exception of Alpine, Amador, Humboldt, Imperial, Madera, Mariposa, Mono, Nevada, Sutter, Tuolumne, Tehama and Yuba. Most of these counties with low birth rates are located in the mountains and in agricultural regions. Increases are conspicuous in areas where the war industries are located. In 1941 the number of white births was 105,634, 84.5 per cent of the total, while in 1940 the number of white births was 93,742, or 83.8 per cent of the total. While the number of Mexican births increased last year, the percentage of such births to the total represented a decrease from 11.6 per cent in 1940 to 11.1 per cent in 1941. There were 13,849 Mexican births registered in this state last year as compared with 12,983 in 1940. The percentage of Negro and Chinese births remained stationary, while Japanese births increased from 1.3 per cent in 1940 to 1.4 per cent in 1941. There were 1,710 Japanese births registered last year.

CONNECTICUT

Personal.—Dr. John Howard Staub, chief of staff of the Stamford Hospital, Stamford, was guest of honor at a dinner, April 9, in recognition of his many years of service to the community.——Dr. Lawrence M. Tierney has been appointed health officer of West Haven, succeeding Dr. Eugene N. Cozzolino.——Dr. Joseph J. Smith, Easton, has been named health officer of Easton, succeeding Dr. William H. Coon.

Crippled Children Clinics.—The new clinic for crippled children was recently opened in Putnam, bringing the total of such clinics to seven supervised by the crippled children division of the state department of health. During the four years that the state department has been conducting the crippled children program about two thousand children have been given care; at present about a thousand are under active care.

Court Bans Birth Control.—The Connecticut Supreme Court ruled in a three to two decision on June 2 that it was illegal for a physician to prescribe the use of contraceptives even if he believed a married woman's life might be jeopardized by pregnancy, newspapers reported. It was stated that this is the second time in two years that a court upheld the state's sixty-two year old law making birth control a criminal offense. The case was said to arise from a request for a declaratory judgment by Dr. Wilder Tileston, David P. Smith clinical professor of medicine, Yale University School of Medicine, New Haven.

DISTRICT OF COLUMBIA

Gibson Award.—Dr. Richard W. Wilkinson, Washington, was presented with the Frank E. Gibson Award at a meeting of the Washington Medical and Surgical Society, May 20, for his "original and outstanding paper on ophthalmology." The prize is given in recognition "of meritorious contributions to medical science" and was established in 1937 in honor of Dr. Frank E. Gibson, permanent treasurer of the society. Dr. Wilkinson graduated at George Washington University School of Medicine in 1928. He is 39 years old.

GEORGIA

Personal.—Dr. Henry Richmond Slack, La Grange, observed his eightieth birthday May 7. For eight years he was president of the Georgia Pasteur Institute, Atlanta, and once served as secretary and chemist for the state board of pharmacy for twelve years; he served several terms as a member of the Revision Committee of the U. S. Pharmacopeia.——Dr. Willie B. Trammell, Statham, has been named health commissioner in the newly established unit in Gwinnett County, with headquarters in Lawrenceville.

Resolution on Control of Psittacosis.—The Georgia State Board of Health adopted a resolution, April 16, prohibiting the importation, purchase, breeding, giving away, sale or offer of sale of birds of the psittacine family. The resolution further provided that importation and breeding of such birds for scientific research for public zoologic gardens may be permitted subject to the approval of the state health officer. Under the resolution, birds of the psittacine family include any parrot, parrakeet, lovebird, macaw, cockatoo, lory, lorikeet or any other bird of the parrot or psittacine family not specifically enumerated. Violation of the regulation is a misdemeanor.

ILLINOIS

Personal.—Dr. Gerry B. Dudley, Charleston, has been appointed a member of the board of public health advisers in the state department of public health, succeeding Dr. Clifford U. Collins, Peoria, chairman, who resigned.—S. DeWitt Clough, president of Abbott Laboratories, North Chicago, was awarded an honorary degree of doctor of laws by Knox College, Galesburg, May 25. Mr. Clough delivered the commencement address on "Research and Readjustment."——Dr. Henry W. Wood, Sheldon, was presented with an emblem and certificate denoting membership in the fifty year club of the state medical society, June 4, at a meeting of the Iroquois County Medical Society.

State Board Ruling on Graduates of Foreign Schools.—Graduates of medical colleges in continental Europe and graduates of the extramural colleges of Scotland and Ireland who finished after July 1, 1936 (Switzerland excepted) will not be admitted to Illinois medical examinations, according to an announcement from the state department of registration and education. This rule will be in force until a true evaluation of the colleges referred to may be obtained, at which time such nonaccredited foreign colleges will be required to prove to the department that their courses and equipment are in every way equal to American medical colleges accredited by the department of registration and education. Other schools in foreign nations may be recognized under the same terms and conditions as obtained before the rule adopted on Feb. 21, 1941. This rule shall supersede all rules heretofore adopted and in conflict therewith but will not be retroactive in the sense that it will affect European graduates who have been issued licenses after examination by the department, even though they graduated after 1936.

Conference on Exceptional Children.—Governor Green called a conference on exceptional children in Chicago, June 15, under the auspices of the Commission for Handicapped Children. The aims of the conference, the first to be held in the state, were to further public understanding of the problems of exceptional children, the resources and facilities available to meet that problem and the needs of such children. Among the speakers on the program were Dr. Edward L. Compere, Chicago, "Services and Facilities Available for the Medical Care and Rehabilitation of Handicapped Children"; Mr. Rodney H. Brandon, Springfield, "The Philosophy Underlying the State's Care for Its Exceptional Children"; Dr. Bert I. Beverly, Oak Park, "Special Problem of Educable Mentally Handicapped Children," and Irving F. Pearson, M.S., Springfield, "Current Legislative Proposals for Exceptional Children." At a special meeting during the conference, consideration was given to the formation of an Illinois chapter of the International Council for Exceptional Children, which has as its purpose the promotion of the education and welfare of exceptional children, the handicapped and the gifted.

Chicago

Federal Funds to Fight Venereal Diseases.—The city department of health will receive $125,000 a year from the federal government to carry on the work against venereal disease.

City Acts to Curb Venereal Diseases.—The city health department quarantined the Lane Hotel, June 23, in an effort to prevent the spread of syphilis, gonorrhea and other venereal diseases among service men, newspapers reported. The action was the first of its kind in the city since the start of the war. The quarantine sign will be taken down only after department of health officials give the place a clean bill of health, it was stated.

Immunologist Goes to Institute of Technology.—Dan H. Campbell, Ph.D., assistant professor of immunology, department of bacteriology and parasitology, Division of Biological Sciences, University of Chicago, has accepted an appointment at the California Institute of Technology, Pasadena, as assistant professor of immunochemistry. Dr. Campbell received his degree of doctor of philosophy at the University of Chicago in 1935 and since that time has been a member of the faculty.

INDIANA

Personal.—Dr. Raymond M. Borland, Bloomington, has been chosen coroner of Monroe County.——Dr. Homer E. Line, Chili, has been appointed health officer of Miami County.——Dr. Lyman D. Eaton, Indianapolis, has been named director of the district health unit at Princeton, covering Gibson, Pike, Posey and Warrick counties.

District Meeting.—The Eleventh Indiana Councilor District Medical Association was addressed in Flora, May 20, by the following: Drs. Lee Palmer, Louisville, Ky., "Progress in Pediatrics"; Howard Allison Miller, Marion, "Nonsurgical Treatment of Pelvic Conditions," and James O. Ritchey, Indianapolis, "Nontubercular Lesions of the Chest." Al H. Wynkoop of Lebanon was the banquet speaker.

IOWA

Hospital to Sponsor Unit for Kenny Treatment.—Drs. James E. Dyson and Dwight C. Wirtz, Des Moines, are establishing a private hospital pavilion for the treatment of infantile paralysis by the Kenny method under the auspices of the Iowa Lutheran Hospital, Des Moines. The two physicians recently returned from Minneapolis, where they had completed a course on the Kenny system. The local unit will be set up at 714 Parnell Avenue, just east of the Lutheran Hospital.

LOUISIANA

Changes in Health Personnel.—Dr. Louis A. Breffeilh, Marksville, head of the Avoyelles Parish health unit, has been appointed in charge of the Iberia unit with headquarters at New Iberia, succeeding Dr. Christopher L. Mengis, who recently became president of the state board of health.

Officers of Graduate Assembly.—Dr. Oscar W. Bethea was recently chosen president-elect of the New Orleans Graduate Medical Assembly, and Dr. Henry Theodore Simon was installed as president. Drs. Donovan C. Browne and Beryl I. Burns are vice presidents; Joseph S. D'Antoni, secretary, and William H. Gillentine, treasurer. All are of New Orleans.

MAINE

Cancer Program Expanded.—The department of health and welfare under recent legislation was commissioned to make investigations concerning "cancer, the prevention and treatment thereof and the mortality therefrom, and to take such action as it may deem will assist in bringing about a reduction in the mortality thereto." The state medical journal states that the program is now under way in the division of medical services in the bureau of health. Currently the cancer committee of the Maine Medical Association, the Women's Field Army, the tumor clinics in the state and the bureau of health are cooperating in the projection of the plan. At a recent meeting of the cancer committee in the bureau of health, suggestions were formulated for the activities of the various groups participating in the program. Under the new setup the bureau of health will be responsible for compilation of data on cancer incidence. Members of the state cancer committee are Drs. Edward H. Risley, Waterville; Magnus F. Ridlon, Bangor; Bertrand A. Beliveau, Lewiston; Merriwell Tieche Shelton, Augusta, and William Holt, Portland.

MARYLAND

Dr. Knox Retires as State Hygienist.—Dr. James Hall Mason Knox Jr., Baltimore, was given a dinner by members of the state department of health May 15 to mark his retirement as chief of the bureau of child hygiene of the department. He has held the position since 1922. Dr. Knox graduated at Johns Hopkins University School of Medicine, Baltimore, in 1898 and has been a member of its faculty since 1909. He has been lecturer in child hygiene at the Johns Hopkins University School of Hygiene and Public Health since 1922. He was president of the American Pediatric Society in 1925, assistant chief, children's bureau, American Red Cross, Paris, France, 1917-1918, and field medical director of the child health activities of the American Red Cross in Europe, 1921-1922. More than one hundred friends, colleagues, nurses and health officers attended the dinner.

MASSACHUSETTS

State Society Approves Prepaid Plan for Medical Care.—The Massachusetts Medical Society approved a statewide system of prepaid budgeting for medical care at its meeting in May. Administration of the plan will be through a nonprofit corporation called the Massachusetts Medical Service on whose directorate the lay public, the subscribers and the medical profession will be represented equally, according to the Boston *Herald*. A state charter was issued on May 27. The plan will first offer a low cost surgical contract designed mainly for the industrial population and the low income group. Besides surgery it will include obstetrics and diagnostic x-ray examination while in the hospital. Later it may be possible to write a complete coverage contract offering medical care in the home, office and hospital. Medical representatives will be Drs. John H. Blaisdell, Boston; James C. McCann, Worcester; Charles E. Mongan, Somerville; Frank R. Ober, Boston, and Samuel A. Robins, Boston.

Personal.—Dr. Lawrence K. Kelley recently resigned as medical superintendent of the Tewksbury State Hospital and Infirmary, Tewksbury, a position he had held for six years.——Dr. Vlado A. Getting, Boston, has been appointed health commissioner of Worcester.——Dr. Henry D. Chadwick, Waltham, was recently chosen president of the Massachusetts Tuberculosis League.——Dr. Arthur L. Watkins, Boston, was named president of the New England Society of Physical Medicine at its meeting in Arlington, June 3.——Dr. Frederick Fuller Russell, professor of preventive medicine and epidemiology, emeritus, Harvard Medical School, Boston, was awarded the honorary degree of doctor of science by the University of Rochester, Rochester, N. Y., at its annual commencement exercises, May 11.——Dr. Harris Peyton Mosher, Walter Augustus Lecompte professor of otology and professor of laryngology, emeritus, Harvard Medical School, Boston, was awarded the honorary degree of doctor of science on June 5 by Jefferson Medical College of Philadelphia.

MICHIGAN

The William J. Mayo Lecture.—The annual William J. Mayo Lecture was delivered in the University Hospital, Ann Arbor, May 22, by Dr. Ralph K. Ghormley, Rochester, Minn. His subject was "A Clinical Pathological Study of Back Pain."

Personal.—Dr. Stephen S. Skrzycki is the new mayor of Hamtramck.——The staff of Providence Hospital gave a dinner at the Detroit Athletic Club, April 30, to honor Dr. David H. O'Donnell on his completion of fifty years in the practice of medicine.

Changes in Health Officers.—Dr. Thomas H. Johnston, formerly of Douglas, Ga., has been appointed director of the Ontonagon-Baraga County Health Unit, succeeding Dr. Rolla J. Shale, Ontonagon, who has gone to Florida.——Dr. Paul A. Lindquist, Manistee, has resigned as medical director of the Mason-Manistee-Benzie County Health Unit to accept a similar position of the new county-city health unit being established in Monroe County.——Dr. Clayton C. Benjamin, Munising, has been appointed in charge of the new county-city health unit with headquarters in Ludington.

MISSOURI

Health Center and Home of County Society.—A five story brick building will be constructed at a cost of about $500,000 on the present grounds of the St. Louis County Hospital. Ground breaking ceremonies were held on May 12. The new construction is planned to house the administrative offices and the various divisions of the county health department and its training center. Provision has also been made for certain of the common services and clinics of the hospital and health

department and for expansion of the hospital outpatient functions. The auditorium wing of the building is planned to provide quarters for the meetings of the St. Louis County Medical Society and the Woman's Auxiliary.

Dr. Hageman Named Director of Laboratories.—The Medical Alumni Quarterly of Washington University announces a series of changes in the laboratories formerly maintained by the school of medicine. Dr. Paul O. Hageman has been appointed director in charge of serology and bacteriology, Dr. Harold A. Bulger of blood chemistry and basal metabolism, Dr. Carl V. Moore of clinical microscopy and Drs. Nathan A. Womack and John E. Hobbs in charge of combined surgical and gynecologic pathology. All are members of the faculty of the school of medicine. This new setup replaces various laboratories on the campus, coordinating their activities. On July 1, 1941 Barnes Hospital, St. Louis, assumed the responsibility for the maintenance and direction of the laboratories. Under the new arrangement, extensive remodeling of the old service building provides additional accommodations. The entire reorganization will soon be completed.

MONTANA

Dr. Armstrong Recovering from Tularemia.—Dr. Charles Armstrong, senior surgeon of the U. S. Public Health Service and director of the Division of Infectious Diseases of the National Institute of Health, Washington, D. C., is convalescing in Hamilton from a severe attack of tularemia, according to the New York *Times*, June 19. He was stricken on May 25 a few hours after his arrival on an official visit to the Rocky Mountain Spotted Fever Laboratory in Hamilton. Since he had not been working on tularemia and was not exposed to it in Hamilton, no one has any idea how he contracted the disease.

NEW YORK

Association of Public Health Laboratories.—Dr. Gustavus H. Klinck Jr., Troy, was chosen president of the New York State Association of Public Health Laboratories at its meeting in Schenectady, May 18. Dr. James S. Taylor, Kingston, was elected vice president and Mary B. Kirkbride, Sc.D., Albany, was reelected secretary-treasurer.

Personal.—Mrs. Elizabeth M. Finigan, health investigator for institutions, division of communicable diseases, state department of health, retired on May 1 after twenty-nine years' service. Mrs. Finigan was appointed to the department on a part time basis in 1912, serving in full time capacity since 1913. One of her achievements during her career as health investigator and lecturer for the state department was a two year survey of the seven Indiana reservations in the state, which resulted in the establishment of medical and nursing services where the need for them was indicated.—— Dr. George P. Berry, professor of bacteriology and assistant dean of the University of Rochester School of Medicine, Rochester, received one of the nine fellowships awarded by the city of Rochester for distinguished service at special ceremonies on May 22.

New York City

Private Patients' Pavilion at New York Hospital.—The New York Hospital announces the dedication of its pavilion for private patients to take place on September 1, the tenth anniversary of the opening of the present hospital buildings. The unit, comprising six floors and more than a hundred rooms for patients and known as only part of the general hospital, will be named the George F. Baker Pavilion in honor of a late governor of the hospital and his son. The pavilion, with the medical and surgical floors of the New York Hospital, will now form the central unit of the hospital, a part of the Cornell University Medical College Center, becoming one of the six separate services operated by the Society of the New York Hospital. Others in the group are the Lying-In Hospital, Children's Clinic, Payne Whitney Psychiatric Clinic and the New York Hospital, Westchester division. Mr. Baker and his son made many financial gifts to the hospital.

Body and Mind Foundation Guilty of Illegal Practice of Medicine.—The Body and Mind Foundation, Inc., was fined $750 and Rudolph Rebold, "research observer" in the foundation's clinic, New York, was given a suspended sentence, June 26, after having been found guilty, June 16, of unlawfully practicing medicine, according to the New York *Times*. The foundation was found guilty on another of the five original counts in the "information"—that of illegally displaying a dispensary sign in front of the old garage which is now the home of the foundation. The court also convicted Rebold on the count that he posed as a physician by using "M.D." after his name in an article he wrote in a pamphlet, issued by Dr. Edward S. Cowles, head of the clinic, as well as on Rebold's license plates for several years. The third defendant in the information, Mrs. Evelin Dolin Schulman, tried under the name of Dr. Eveline Dolin, alleged aide to Dr. Cowles in the foundation, was acquitted. During the course of the trial, state witnesses told of paying $12 or more when being admitted as patients and of Rebold interrogating them on symptoms of illness which they simulated and which he recorded in notes. He admitted on the stand that he passed these notes over to Dr. Cowles when he was about to examine the patient but insisted that he did so merely as a matter of "professional observations." Rebold said he was a student for a brief time in a medical school. At one time he was a civilian assistant to the pathologist at Sing Sing prison at necropsies and at another time the biochemist at the Hospital for the Ruptured and Crippled. Dr. Cowles did not appear at the trial, but on the day before the trial started, June 5, he appeared for a hearing on disciplinary charges before a subcommittee of the grievance committee of the state education department.

NORTH CAROLINA

Dr. Levine Appointed Pathologist.—Dr. Jacob Levine has been appointed head of the pathology department of the city hospital system at Winston-Salem to succeed Dr. Thomas T. Frost, Winston-Salem, who is resigning to go to Indianapolis. The appointment was effective on July 1. Dr. Levine has been pathologist at the Veterans Administration Facility, Aspinwall, Pa., since 1938. He graduated at Syracuse University College of Medicine in 1928.

District Meeting.—The Tenth District Medical Society met in Asheville on May 27. Included on the program were:

Dr. Wingate M. Johnson, Winston-Salem, The Nervous Patient.
Dr. Charles F. Owen Jr., Canton, Gunshot Wounds of the Abdomen.
Dr. Charles H. Armentrout, Asheville, Treatment of Congestive Heart Failure.
Dr. Joseph F. McGowan, Asheville, Internal Diseases of the Eye Seen in General Practice.
Dr. William A. Hoover, Murphy, Disease Which May Simulate Acute Conditions of the Abdomen.
Dr. Allison L. Ormond, Black Mountain, Pleural Shock and Air Embolus in Artificial Pneumothorax.

OHIO

Dr. Cummer Receives the Academy Award.—Dr. Clyde L. Cummer, Cleveland, formerly president of the Ohio State Medical Association, has been announced as winner of the 1942 distinguished service award of the Academy of Medicine of Cleveland. Dr. Cummer, who is assistant clinical professor of dermatology and syphilology at Western Reserve University School of Medicine, Cleveland, has been a member of the faculty since 1909. He served as president of the Cleveland Academy in 1923 and is now chairman of the Council on Scientific Assembly of the American Medical Association.

County Society Observes One Hundredth Anniversary.—The Summit County Medical Society held a dinner dance at the Akron City Club on June 3 to observe the one hundredth anniversary of its founding. An exhibit of records of the society, photographs and war service medals won by members who have been engaged in eleven wars of the United States and foreign countries, beginning with the War of 1812, were displayed under the direction of Dr. Alexander S. McCormick, secretary for the last twenty-eight years. The exhibit also included numerous instruments used years ago and some of the instruments invented or designed by members of the society. The Summit County Medical Society was organized in 1842, two years after the establishment of the county, largely through the efforts of Dr. Moses Thompson (1776-1858), who had settled in Hudson and who retired from practice in 1815. The society, forced into inactivity during the Civil War, was reorganized in 1866 and again in 1884, 1898 and 1923.

OKLAHOMA

Dr. Battenfield to Go to New York.—Dr. John Y. Battenfield, Oklahoma City, director of the division of preventable diseases, Oklahoma Department of Public Health, has been appointed medical associate of the National Society for the Prevention of Blindness. Before joining the headquarters of the society in New York, Dr. Battenfield will serve for several months with a special trachoma project in Oklahoma, carried on under the auspices of the national society and the state health department. Dr. Battenfield graduated at the University of Oklahoma School of Medicine, Oklahoma City, in 1937, later receiving the M.P.H. degree at Johns Hopkins University School of Hygiene and Public Health, Baltimore.

PENNSYLVANIA

Society News.—Dr. Lester Hollander, Pittsburgh, discussed "Afflictions of the Skin and Allied Allergic Conditions" before the Fayette County Medical Society in Uniontown, June 4.—— Dr. Grover C. Weil, Pittsburgh, discussed the sulfonamides before the Cambria County Medical Society in Johnstown, June 18.

Philadelphia

Philadelphia Medicine.—Starting with its June 13 issue, the bulletin of the Philadelphia County Medical Society bears the name of *Philadelphia Medicine*. Known for many years as the *Weekly Roster and Medical Digest*, the bulletin's name last year was changed to *Weekly Roster, Philadelphia Medicine*. Now the name reads *Philadelphia Medicine*.

New Professor of Anesthesiology.—Dr. Philip D. Woodbridge, on the staff of the Lahey Clinic, Boston, since 1928, has been appointed professor of anesthesiology at Temple University School of Medicine, effective July 1. Dr. Woodbridge graduated at Harvard Medical School, Boston, in 1921. He was president of the New England Society of Anesthesiology in 1934 and 1936 and of the Boston Society of Anesthetists in 1935 and 1937.

Immunization Campaign. — The Philadelphia Department of Health launched its annual immunization campaign against diphtheria June 1. Temporary stations were opened in eighty-five schools and ten health centers for immunization of children between 9 months and 6 years of age. According to a newspaper report this annual program has reduced deaths from diphtheria in Philadelphia from three hundred and fifteen in 1925 to none in 1940. Three deaths of children who had not been immunized occurred in the city last year.

Garvan Medal Awarded to Dr. Seibert.—Florence B. Seibert, Ph.D., associate professor of biochemistry, Henry Phipps Institute, has been announced as the winner of the 1942 Francis P. Garvan Gold Medal of the American Chemical Society. Presentation will be made at the society's meeting in Buffalo, September 7. Dr. Seibert, who isolated the active substances in tuberculin, received her degree in philosophy at Yale University, New Haven, Conn., in 1923. For a time she served on the staff of the University of Chicago, going to the Henry Phipps Institute in 1932. The Garvan Gold Medal is awarded to women in chemistry.

Pittsburgh

Personal.—Francis R. Holden, Ph.D., has been appointed industrial hygienist on the staff of the Industrial Hygiene Foundation at the Mellon Institute, to be in charge of industrial hygiene services of all types. Dr. Holden has been specializing in industrial medicine since he received his degree of philosophy at the University of Cincinnati in 1934. For the past year and a half he has been studying natural gas under a fellowship at the institute, according to the *Pittsburgh Medical Bulletin*.

SOUTH CAROLINA

State Medical Election. — Dr. William Atmar Smith, Charleston, was chosen president-elect of the South Carolina Medical Association at its recent annual meeting and Dr. Thomas A. Pitts, Columbia, was installed as president. Dr. Joseph Warren White, Greenville, was chosen vice president and Dr. Julian P. Price, Florence, was reelected secretary-treasurer. The next annual meeting will be held in Spartanburg.

TENNESSEE

Personal.—Drs. John M. Lee, Nashville, and William K. Vance Jr., Bristol, were chosen members of the state public health council in March, and Dr. Webster B. Key, Memphis, was reappointed to a three year term.——Dr. Frank A. Moore, Jackson, has resigned as regional health officer of West Tennessee to become a captain in the U. S. Army Medical Corps. ——J. Frank Taylor, Martin, has been appointed state supervisor of health and physical education, newspapers reported May 7, to carry on the physical education program of the state department of education.

Federal Law Invoked to Curb Prostitution.—Federal action to help state authorities stamp out prostitution is meeting with general approval in the twenty-seven counties of Tennessee, where the May act was invoked for the first time on May 21, according to an announcement from Dr. Ray Lyman Wilbur, Stanford University, Calif., president of the American Social Hygiene Association. The May act was signed by the President on July 11, 1941 and provides that it shall be unlawful to engage in prostitution or to aid or abet prostitution within such reasonable distance of any military or naval camp or station as the Secretary of War or Navy shall determine to be needful to the efficiency, health and welfare of the Army or Navy. The American Social Hygiene Association is studying the effects of and public reaction to the application of this new federal law. Newspapers have acknowledged favorable public sentiment concerning the project in the Camp Forrest area, which includes several counties.

UTAH

Society News. — The Salt Lake County Medical Society devoted its meeting recently to a symposium on coronary occlusion. Drs. Fuller B. Bailey discussed "The Historical Background, Etiology and Diagnosis of Coronary Occlusion"; Louis E. Viko, "Diagnosis and Treatment of Coronary Occlusion," and Robert T. Jellison, "Industrial Phase of Heart Disease." All are of Salt Lake City.

VIRGINIA

State Medical Board Reelected. — Governor Darden recently reappointed the following members of the state board of medical examiners for a term of four years ending March 31, 1946: Drs. Robley D. Bates Sr., Newtown; Philip St. L. Moncure, Norfolk; Hack U. Stephenson, Richmond; William B. McIlwaine III, Petersburg; Isaac C. Harrison, Danville; John W. Preston, Roanoke; Philip W. Boyd, Winchester; Lewis Holladay, Orange, and Francis H. Smith, Abingdon.

Dr. Wampler in Charge of Industrial Medicine.—Dr. Fred J. Wampler, professor of preventive medicine at the Medical College of Virginia, Richmond, since 1928, has been named professor of preventive and industrial medicine, according to the state medical journal. Dr. Wampler graduated at Rush Medical College, Chicago, in 1913. He received his certificate in public health at Johns Hopkins University, Baltimore, in 1929. He was field worker in the Mongolian-Shansi pneumonia plague epidemic in 1918, director of health and sanitation of American Red Cross China Famine Relief in 1921 and associate director for Shansi China Council on Health Education from 1922 to 1926, becoming health officer of the Accomac-Northampton Health Unit the following year.

WASHINGTON

Dr. Dewey Goes to San Antonio. — Dr. Leonard A. Dewey, Seattle, chief of the division of epidemiology and venereal disease control, Washington State Department of Health, is on leave of absence to the U. S. Army. Dr. Dewey has been placed in charge of venereal disease control in the eighth corps area with headquarters in San Antonio.

WEST VIRGINIA

State Society Meeting in Huntington.—The West Virginia State Medical Association will hold its seventy-fifth annual meeting in Huntington, July 13-15, under the presidency of Dr. Richard O. Rogers, Bluefield, who will talk on "The War and Medical Trends." The program this year is an innovation which was announced some months ago. Instead of scientific papers making up the general program under section meeting, a series of symposiums, designed for the general practitioner, will be conducted by guest speakers:

Dr. Ralph Irving Lloyd, Brooklyn, The Proptosed Eye as a Diagnostic Problem.
Dr. Meredith F. Campbell, New York, Urological Conditions in Childhood.
Dr. George C. Griffith, Philadelphia, Precordial Pain.
Dr. Bayard T. Horton, Rochester, Minn., Headaches: Recent Advances in Treatment.
Dr. Francis Bayard Carter, Durham, N. C., Management of Difficulties Arising in the Course of Normal Labor.
Dr. John Scudder, New York, Management of Surgical Shock.
Dr. John Grove Kuhns, Boston, Management of Chronic Arthritis.
Drs. William Halsey Barker and Edgar J. Poth, Baltimore, Medical and Surgical Aspects of Chemotherapy, respectively.

Other features of the program are a talk by Hon. H. J. Anslinger, commissioner of narcotics, Washington, D. C., on "Narcotics as They Affect the Physician"; the oration on medicine by Dr. William V. Wilkerson, Prenter, on "Pneumonia," and the oration on surgery by Dr. Robert J. Reed, Wheeling, on "A Forty Hour Week for Surgeons." At the annual banquet Wednesday evening the speakers will be Paul V. McNutt, federal security administrator, and Dr. Allan Roy Dafoe, Callander, Ont.

GENERAL

Meeting of Agricultural Chemists Canceled.—The Association of Official Agricultural Chemists, Inc., announces that its meeting planned for October 27-29 will not be held on account of the war emergency.

Government Hygienists Choose Officers. — Marion F. Trice, Raleigh, N. C., was chosen chairman of the National Conference of Industrial Hygienists at its meeting in Washington, D. C., April 10. Dr. Paul A. Brehm, Madison, Wis., was named vice chairman and Mr. J. J. Bloomfield, Bethesda, Md., secretary-treasurer. The next meeting will be held in Washington, the dates to be announced later.

Surgical Company Warns of Fraudulent Check Passer. —Kay Surgical, Inc., announces that a "Dr. John M. LaTuff," giving his address as 22 W. Indiana Avenue, St. Paul, Minn., called at their store at 246 Madison Avenue, Memphis, Tenn., and purchased a leather bag and other items. His check on the Security State Bank of St. Paul was returned with the notation "no account." The man was of average size, brunet, between the ages of 30 and 35 and wore a mustache, it was said.

Relief Committee Names Director. — Dr. Marjorie E. Reed, Plymouth, Pa., was appointed director of Woman Physicians of the Medical and Surgical Relief Committee of America by Dr. Joseph Peter Hoguet, New York, national medical director of the committee, at a meeting on June 7. Dr. Reed, who became affiliated with the committee last February, has built up in Luzerne County, Pa., an active group of women physicians who have sent quantities of supplies to the committee's headquarters in New York.

Nutrition Charts.—The Philadelphia Child Health Society has prepared for distribution charts showing the vitamin content of average servings of various vegetables, also protein, calcium, phosphorus, and iron content. On the reverse side of each chart is found information as to the exact content in an average serving of each of the vegetables shown in the chart, the recommended daily allowances, and also information concerning other vegetables not shown in the chart. Material of this type is exceedingly useful in the present effort for improvement of nutrition. The complete set of the eight charts is available at 50 cents, and may be secured from the Child Health Society, Room 609, 311 South Juniper Street, Philadelphia Pa.

Pamphlet on the Kenny Treatment of Poliomyelitis.— The National Foundation for Infantile Paralysis, Inc., has made available a booklet entitled "The Kenny Method of Treatment for Infantile Paralysis." The manual, covering varying aspects of the disease, is written by Drs. Wallace H. Cole, John F. Pohl and Miland E. Knapp, Minneapolis, all of whom have observed and considered the Kenny method during the two years in which the foundation has financed a study of the treatment at the University of Minnesota School of Medicine, Minneapolis. Copies may be obtained by members of the medical, nursing or physical therapy professions by writing to the National Foundation for Infantile Paralysis, Inc., 120 Broadway, New York.

Lewis Carris Wins Leslie Dana Gold Medal.—Lewis H. Carris, LL.D., New York, director emeritus of the National Society for the Prevention of Blindness, has been announced as the recipient of the Leslie Dana Gold Medal, awarded annually for outstanding achievements in the prevention of blindness and the conservation of vision. Mr. Carris was chosen for the award by the St. Louis Society for the Blind, through which the medal is offered by Mr. Leslie Dana of St. Louis, on the recommendation of the Association for Research in Ophthalmology. Prior to his retirement in 1940 from active service as managing director of the national society, Mr. Carris had been identified with the work of national and allied groups interested in the conservation of the blind. He is now 72 years of age.

Nominations for the Theobald Smith Award. — The American Association for the Advancement of Science has announced that nominations for the Theobald Smith Award, consisting of $1,000 and a bronze medal provided by the Eli Lilly Company of Indianapolis, are now being accepted. The nominees for the award must have been not over 35 years of age on January 1 in the year in which the award is made. The purpose of the award is to recognize demonstrated research in the field of medical science, taking into consideration independence of thought and originality. Each nomination must be accompanied by six copies of reprints of each principal paper of which the nominee is the author. Nominations and supporting material should be sent to Malcolm H. Soule, LL.D., secretary of the section on medical sciences (N), Hygienic Laboratory, University of Michigan, Ann Arbor, Mich. Dr. Soule is also secretary of the award committee.

New Officers of Medical Golfing Association.—Dr. John B. Morgan, Cleveland, was elected president of the American Medical Golfing Association at its twentieth annual tournament at the Seaview Country Club, Atlantic City, N. J., June 8. Vice presidents are Drs. Waltman Walters, Rochester, Minn., and John Pennington, Atlantic City. William J. Burns, Lansing, Mich., was reelected executive secretary of the group to serve his fourteenth term. The next tournament will be at San Francisco in June 1943. Dr. Daniel A. Williams, Kansas City, Mo., won the Will Walter trophy, symbolic of the championship of the tournament, with a score of 154 for thirty-six holes. Dr. Thomas A. Kyner, Kansas City, won the Detroit trophy for thirty-six holes low net with a posted 163 gross against a 14 stroke handicap for each round for a net score of 135. The St. Louis trophy was won by Dr. John Murphy, Detroit, for the second best low gross score and Dr. John H. Harris, New York, took the President's trophy with second best net score.

CORRECTION

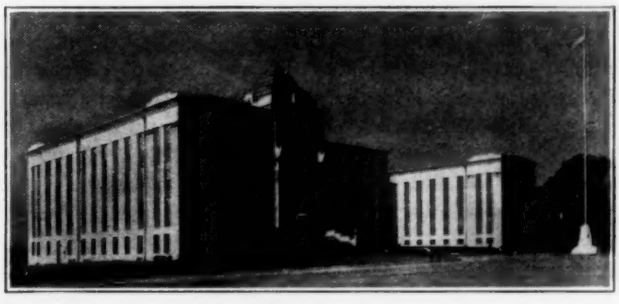
Mustard Gas Injuries to the Eyes.—The abstract entitled "Mustard Gas Injuries to Eyes" in the Current Medical Literature department of THE JOURNAL, June 13, page 588, contains the statement ". . . 1 drop of a 5 per cent isotonic solution may be instilled." This is an error. The line should read ". . . 1 drop of a 0.5 per cent isotonic solution. . . ."

The Renaissance of Prostatectomy.—In the article by Dr. Edwin Davis in THE JOURNAL, June 6, the words "prostatic resection" inadvertently appeared toward the end of the third paragraph on page 489, when "prostatectomy" was meant. The sentence should read "By the intelligent, prostatectomy is now regarded as a welcome means of relief rather than *le dernier ressort.*"

Government Services

New Veterans' Hospital in Illinois

The Veterans' Hospital at Marion, Ill., for general medical and surgical patients has been completed at a cost of $1,500,000. The new construction consists of a main hospital building to care for 167 patients, dining hall and kitchen facilities, residences for staff officers and nurses, attendants' quarters, boiler house, laundry and garage. The five story main hospital and administrative building is faced with Indiana limestone and provided with polychrome terra cotta spandrels. The basement of the building is devoted to the physical therapy department, necropsy rooms and morgue and a chapel. The first floor is



Veterans' Hospital at Marion, Ill.

given over to administrative and clinical activity which include units for roentgen therapy, dental, eye, ear, nose and throat, laboratory work and examination. The second and third floors of the building are devoted to ward purposes, each floor being divided into two separate ward units completely equipped and staffed by a doctor and nurse. Operating rooms are located on the fourth floor. The main building can be expanded to accommodate about 400 patients by the construction of a wing at either end of the building. Space has been allowed for the expansion of all buildings in the utility group when this becomes necessary. To the rear of the hospital group will be three 392-bed barrack buildings for the care of domiciliary members. One domiciliary building will be built soon and the remainder at a later date, giving this facility an ultimate capacity of about one thousand five hundred and seventy beds.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 16, 1942.

Cross Infection in Hospital Wards

At the Royal Society of Medicine a discussion took place on cross infection in wards. Dr. Robert Cruickshank said that the streptococcus was the arch enemy but that staphylococcic infections were becoming common in evacuated infant nurseries, gastroenteritis was a common infection among young children, and diphtheritic cross infection, often symptomless, could give trouble in diphtheria, scarlet fever and measles wards. Dealing with respiratory infections, in which air was the principal vehicle, when a person with an acute infection sneezed he ejected many droplets, most of which described a short trajectory to the ground, but a proportion of minute droplets remained suspended in the air for short periods and might be an important factor in air borne infection. Falling on the surface, they might be raised again into the air as infected dust. For the control of infection adequate ventilation, bed spacing and isolation accommodation were necessary. Screens might be an alternative to isolation, but they should reach to the floor. For attendants there should be a freer use of masks. Dust was a major problem in streptococcic and diphtheritic wards. Much could be done by instruction of the nursing staff in the newer ideas as to infection by ward discipline and tackling the problem of dust.

Dr. R. H. Dobbs said that the first approach to the problem should be by satisfactory hospital architecture. There should be an admission ward with cubicles in which the child spent the first forty-eight hours. Ward units should consist of six to eight cots, with cubicles in which infectious children could be nursed. But many hospitals had to do their best with twenty or thirty beds in the ward and no admission unit. Here movable glass screens had been of great advantage. In hospitals for infectious diseases there should be 12 feet bed spacing between cot centers. Masks should be worn by physicians and nurses.

Dr. N. D. Begg said that in fever hospitals one must guard against secondary infection by different types of the primary infecting organism. In the North-Eastern Hospital, London, the principle of structural separation culminated in single or double bed isolation units in the proportion of 40 per cent of the total. The most difficult problems were the enteral infections of unknown etiology, which included infantile gastroenteritis. In the control of this serious risk to infant life breast feeding was the most important single preventive measure. As to respiratory infections, the hemolytic streptococcus was widespread in its activity in fever hospitals. Cross infection, as indicated by change of infecting type, was frequent in scarlet fever wards.

Mr. Wylie McKissock said that there was a regrettable tendency to minimize hospital infection of wounds. He described a hospital with Streptococcus pyogenes infection in his department of neurosurgery in cases of clean operation wounds or wounds of the head of varying degrees of severity. Before the adoption of a special system of ward precautions, nursing care and dressing technic the percentage of cases of hospital infection was 15.4. After its adoption the percentage was reduced to 1.1 and later to 0.8. The reservoir of the streptococcus still existed in the wards during the period of control.

Medical Views of the Falling Birth Rate

The serious threat to our population due to the falling birth rate continues to attract attention. Prof. Munro Kerr, president of the Obstetrical and Gynecological Section of the Royal Society of Medicine, has made a medical contribution to the discussion in the form of a communication to the *Times*. The annual birth rate per thousand of population for England and Wales was 32.4 for the decade 1881-1890 (average), 18.3 for the decade 1921-1930 (average), 14.9 for the year 1939 and 14.6 for the year 1940. Up to the present the fall in the birth rate has been offset to a considerable extent by the dramatic fall in the infant death rate in the present century—from 150 to 55 per thousand live births. But this compensation must necessarily diminish. Nothwithstanding the general fall of infant mortality there has been little lowering of the stillbirth rate or neonatal (first month) mortality, as these figures show:

Rates per Thousand Live and Stillbirths
(England and Wales)

Year	Stillbirths	Neonatal Death Rate (Ages 0-4 Weeks)	Combined Rate
1928	40.1	29.8	69.9
1929	40.0	31.5	71.5
1936	39.7	29.0	68.7
1937	39.0	28.6	67.6

Munro Kerr states that not all these deaths are preventable, but something between 30 and 50 per cent could be prevented by improved antepartum, intrapartum and postnatal care. For this purpose he has been advocating for twenty years a national maternity service in which obstetric specialists and the public health service would work in cooperation. He quotes from the brochure Population and Fertility, issued by the Population Investigation Committee in 1939 under the editorship of D. V. Glass (statistician) and C. P. Blacker (physician and secretary of the Eugenics Society): "The causes of the decline of fertility are numerous, complex and deep seated. In western European countries they form so intimate a part of the twentieth century view of life that effective countermeasures will not be easy to find. What we should do is not to suppress birth control but to remove as many as possible of the obstacles impeding the free expression of the parental instinct. Conditions should be created in which people would want to have children."

Munro Kerr thinks that there is little prospect that the birth rate can be increased unless the government tackles the problem seriously and introduces radical measures. Unfortunately no political party looks far ahead or has much vision. That is left to small minorities who are called "alarmists." He warns the government, as others have done, that the situation will become desperate in some years, when hurried legislation will be too late.

In the *Times* Sir Francis Freemantle (expert on public health and member of parliament) points out that the present birth rate of 14.1 per thousand is matched against the death rate. But the crude death rate of 14 must almost certainly rise, for every infant has now a life expectation of 60 years, which represents a true death rate of 1,000 divided by 60, which is 16.6. The Population Investigation Committee made its estimate by the most scientific method—the net reproduction rate—which is defined as the average number of children which will be born to each newborn child if the present birth and death rates continue. To maintain the population, this rate must be unity. But the committee found that the women of the child bearing ages—from 15 to 50 years—are producing only three fourths of the children required to maintain their numbers. Dr. Charles has shown that, if fertility and mortality remain constant as in 1935, our population of 41,000,000 will

shrink in forty years to 36,000,000 and in one hundred years to 20,000,000; but if fertility and mortality continue to decline as in recent years the figures would shrink to 31,500,000 and 4,500,000 respectively.

Smoking in Wartime

In normal times many persons smoke tobacco, especially cigarets, to excess. During the war the habit seems to be much increased. In the *Times* a physician, Sir Maurice Cassidy, says in a communication that nobody who travels by road or rail can fail to be impressed by the amount of smoking in the fighting services. Most of the men seem to have an unlimited supply of cigarets, which they never cease to smoke. When he asked if any attempt was made to curb their addiction they told him that it is very difficult not to smoke when everybody is smoking, that their officers smoke as much as they do and that a lecture generally begins with the words "You may smoke," when everybody automatically lights a cigaret. Now these men are being trained to fight for their lives. Yet were they being trained for a soccer cup tie or a boat race their smoking would be seriously restricted, if not stopped. The cigaret impairs the oxygen carrying capacity of the blood by the carbon monoxide inhaled. At the same time it often ruins digestion and diminishes resistance to respiratory infection. We are rationed in meat, milk, eggs, sugar, butter and clothing. Surely, says Sir Maurice Cassidy, the time has come to ration tobacco and thereby increase our efficiency.

Examination of Young Persons for the Detection of Tuberculosis

The National Association for the Prevention of Tuberculosis has issued a memorandum concerned with the health of young persons of school age or about to enter industry, showing the importance of discovering symptomless tuberculosis. Pulmonary tuberculosis begins without the patient's knowledge and, when he comes for treatment, is advanced and he has probably infected others; hence the importance of early diagnosis in the prevention of the disease. As this can be done, it is said, only by x-ray examination of the chest, the association holds that more x-ray examinations of apparently healthy young persons are needed. In 1941 the trade union congress passed a resolution urging the government to provide for such examination not less than a year after young persons enter industry and its repetition every year until the age of 18. In the opinion of the National Association for the Prevention of Tuberculosis every young person should be radiologically examined on leaving school as well as at intervals during early adult life. Those who enter the fighting services could easily be included in this scheme and also those entering other government and municipal services. Young persons in secondary and technical schools and in colleges and universities are at a period of life when physical and mental strain is great and the incidence of tuberculosis high. The association appeals to physicians responsible for health in these institutions to inaugurate the use of routine radiologic examination.

New Food Restrictions

The general policy of the government has been as far as possible to insure that every person has a due supply of food and that no one, whatever his means, more than that. Up to the present there has not been much control of the food served in hotels and restaurants, though the effects of the war are evident in the menus. The government now announces new restrictions. Meals are limited to a maximum of three courses. Provision will be made to prohibit the sale of fish, game and poultry in any hotel or restaurant on specified days in order that these articles may be more readily available for domestic consumption. For the remainder of the war the government will discourage, other than for public purpose, the holding of luncheons and dinners attracting large numbers of people. The serving of food after 11 p. m. will be prohibited except to residents at hotels and establishments catering for night workers. The effect of this prohibition will be to stop the sale of food at night clubs and similar places. These decisions were reached by a committee of the cabinet, which examined the whole subject of meals in hotels and restaurants, criticisms of "luxury feeding" and the effect on public morale. A maximum of three courses may not seem to be a hardship, but at present five—hors d'œuvres, soup, main dish, fish, meat or poultry—are fairly common in hotels.

Changes in the British Pharmacopeia to Save Alcohol

In a previous letter the restrictions in the prescribing of many drugs brought about by the war was described. Economy in alcohol is essential, and it was mentioned that alternatives for preserving surgical instruments from rust were suggested. In the fifth addendum to the British Pharmacopeia, which is about to be published, many modifications have been made in the preparations for internal use. The principal one is the introduction of eleven concentrated tinctures. The following are four times as strong as before, so that only a fourth of the amount of alcohol consumed in a certain dose of the active ingredient will be necessary: concentrated tincture of orange, lemon, capsicum, quassia; concentrated compound tincture of cardamon, cinchona and gentian; concentrated ethereal tincture of lobelia, and ammoniated tincture of valerian. The new concentrated camphorated tincture of opium is eight times as strong. The liquid extracts of quillaia and of squill of the British Pharmaceutical Codex and emulsions of chloroform and peppermint are also made official. There is a new concentrated solution of ethyl nitrite about eight times as strong as the spirit of nitrous ether and a new aromatic solution of ammonia equivalent in strength to ammoniated spirit.

Diphtheria Prophylaxis

The minister of health announces that he is glad that at least one third of the child population under 15 has been immunized against diphtheria. But if the incidence and mortality of diphtheria are to be substantially reduced at least 3 out of every 4 children should be immunized. In view of this as well as the extra risks of wartime conditions and the importance of avoiding all preventable demands on hospital accommodation, he urges vigorous efforts to immunize the greatest possible number of children. Diphtheria is now the most fatal disease among children between the ages of 4 and 10 years and the second most fatal between 2 and 5 years. To protect these susceptible age groups it is important to immunize children under school age. The minister suggests that the local health authorities, with the cooperation of the press, should institute a campaign to make known to parents the advantage of immunization and the clinics at which it is carried out.

In Scotland the campaign for immunization has been very successful. Among 766,000 children immunized, there was only 1 death from diphtheria in 1941, but among the 389,000 not immunized there were 418 deaths.

Marriages

GUNNAR D. QUISLING to Miss Helen Anderson, both of Madison, Wis., at Camp Stewart, Ga., March 29.

EDMUND JAMES BROGAN, Philadelphia, to Miss Miriam Elizabeth Brown of Wynnewood, Pa., March 21.

ERNEST COLE STRODE, Louisville, Ky., to Miss Mary Marjorie Byrne in St. Matthews, April 3.

ROY V. TAYLOR, Lenoir City, Tenn., to Miss Edith Quillen in Philadelphia, Tenn., recently.

Deaths

Max Samuel Wien ✠ Chicago; Rush Medical College, Chicago, 1920; in 1922 joined the staff of the University of Illinois College of Medicine as an instructor in the department of dermatology, subsequently serving as associate, assistant professor and associate professor; since 1932 professor of dermatology at the Cook County Graduate School of Medicine; associate attending dermatologist at Research and Educational Hospital and a member of the staff of Michael Reese Hospital; at one time served on the staffs of Mount Sinai and Cook County hospitals; member of the American Academy of Dermatology and Syphilology, the Society of Medical History, the Institute of Medicine of Chicago and the Chicago Dermatological Society of which he had once served as president and secretary; a diplomate of the American Board of Dermatology and Syphilology; author and co-author of books concerned with his specialty; aged 46; died, June 23, of cerebral embolism.

Ernest Harl White ✠ Little Rock, Ark.; Harvard Medical School, Boston, 1922; instructor in microscopic anatomy and consecutively clinical instructor, assistant professor, associate professor of obstetrics and gynecology and professor of obstetrics at the University of Arkansas School of Medicine; diplomate of the American Board of Obstetrics and Gynecology; member of the Central Association of Obstetricians and Gynecologists; past president and secretary of the Pulaski County Medical Society; president of the Arkansas Society of Obstetrics and Gynecology; formerly consultant in obstetrics for the state board of health; on the staffs of St. Vincent's Infirmary, Baptist State and City hospitals; aged 58; died, April 11.

Maurice Lewison ✠ Chicago; Northwestern University Medical School, Chicago, 1906; professor of medicine and formerly professor of physical diagnosis at the University of Illinois College of Medicine; diplomate of the American Board of Internal Medicine; fellow of the American College of Physicians; attending physician from 1919 to January 1942 and since then senior attending physician, Mount Sinai Hospital, and president of the staff from 1919 to 1929 and honorary president since 1929; on the consultant emeritus staff of the Cook County Hospital; senior author of a book entitled "Manual of Physical Diagnosis"; aged 56; died, June 17, in St. Luke's Hospital of brain tumor.

Lincoln Fleetford Sise ✠ Brookline, Mass.; Harvard Medical School, Boston, 1901; diplomate of the American Board of Anesthesiology, Inc.; member of the American Society of Anesthetists, Inc.; clinical assistant in anesthesia at the Harvard Medical School, Courses for Graduates, from Sept. 1, 1916 to Sept. 1, 1927; lecturer on anesthesia at the Tufts College Medical School, Boston, from 1920 to 1923; served during World War I; at one time assistant visiting anesthetists, Boston City Hospital, and visiting anesthetist, Long Island Hospital, Boston; formerly chief anesthetist of the Lahey Clinic, Boston; aged 67; died, April 28, of arteriosclerosis.

John J. Chandler, Lutesville, Mo.; St. Louis College of Physicians and Surgeons, 1892; member of the Missouri State Medical Association; for many years bank president; member of the Bollinger County Selective Service System; member of the draft board during World War I; formerly county coroner and member of the school board; aged 77; died, May 5, in St. Francis Hospital, Cape Girardeau, of burns received when his clothes became ignited from a flaming wastepaper basket.

George Bradley McFarland, Bangkok, Thailand; Western Pennsylvania Medical College, Pittsburgh, 1890; College of Physicians and Surgeons, Baltimore, 1891; also a dentist; for many years a medical missionary; emeritus professor of medicine at the Chulakankarana University Faculty of Medicine, Thailand, formerly known as the Royal Medical College, where he was dean; held many Thailand decorations; aged 75; died, May 3.

Aloysius Nicholas J. Dolan, Excelsior Springs, Mo.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1898; member of the Missouri State Medical Association; for many years associated with the U. S. Veterans' Bureau; aged 70; on the staff of the Veterans Administration Facility, where he died, April 5, of arteriosclerotic heart disease with myocarditis and bronchopneumonia.

Ithimer Maxwell Casebeer, Clinton, Ind.; Rush Medical College, Chicago, 1893; served as a captain in the medical corps of the U. S. Army during World War I and at the time of his death held the rank of lieutenant colonel in the Auxiliary Officers Reserve Corps; aged 72; died, May 4, in the Vermillion County Hospital of embolus during an operation for removal of the left kidney.

Charles R. Borzilleri, Buffalo; University of Buffalo School of Medicine, 1895; member of the Medical Society of the State of New York; fellow of the American College of Surgeons; past president of the Medical Society of the County of Erie; a founder and formerly medical director of the Buffalo Columbus Hospital; aged 69; died, May 31, in North Evans, N. Y., of coronary thrombosis.

Edward Chase Durgin, Marshfield Hills, Mass.; Tufts College Medical School, Boston, 1901; served as a captain with the American Expeditionary Forces during World War I; at one time associated with the U. S. Public Health Service; formerly school physician and medical adviser to the board of health of Marshfield Hills; aged 64; died, April 26.

Basil Taylor Bennett Sr., Trenton, Tenn.; University of Nashville (Tenn.) Medical Department, 1893; Vanderbilt University School of Medicine, Nashville, 1893; member of the Tennessee State Medical Association; formerly health officer of Trenton; for many years a member of the school board; aged 70; died, May 3, of metastatic carcinoma.

Thomas Clyde Emmick, Mount Vernon, Ind.; Medical College of Ohio, Cincinnati, 1897; at various times secretary of the board of health of Mount Vernon; medical director of the county draft board during World War I; aged 69; died, May 14, in the Welborn-Walker Hospital, Evansville, of pneumonia following a cerebral hemorrhage.

Lambert Henry Weinheimer, Syracuse, N. Y.; Syracuse University College of Medicine, 1909; member of the Medical Society of the State of New York; attending ophthalmologist at St. Joseph Hospital and St. Mary's Maternity Hospital and Infants Asylum; aged 54; died, April 7, of cerebral hemorrhage and cardiorenal vascular disease.

Charles Ernest Clark, Gazi-antep, Turkey, Asia; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1902; for many years a medical missionary; conducted clinics in isolated villages and was on the staff of the American Hospital; aged 67; died, April 28, of pneumonia and empyema.

George Edward Tuers, Paterson, N. J.; Jefferson Medical College of Philadelphia, 1899; member of the American Society of Anesthetists, Inc.; past president of the Passaic County Medical Society; chief anesthetist of the General Hospital; aged 64; died, April 20, of chronic myocarditis and arteriosclerosis.

William Lester Grogan, Utica, N. Y.; Albany Medical College, 1915; served overseas in the U. S. Army during World War I; aged 53; consultant on the staffs of the Utica State Hospital and the Marcy (N. Y.) State Hospital; on the staff of St. Elizabeth Hospital, where he died, May 23.

George Wilbur Duvall ✠ Shelbyville, Ky.; Hospital College of Medicine, Louisville, 1906; for many years superintendent of the Central Free Dispensary at Rush Medical College, Chicago; at one time health officer of the Davies County (Ky.) Health Department; aged 61; died, May 1.

George Frederick Glass, Cleveland; College of Physicians and Surgeons, Baltimore, 1893; served as a major in the medical corps of the U. S. Army in France during World War I; aged 73; died, April 27, in the Cleveland Clinic Hospital of hypertensive cardiovascular disease.

Henry Jackson Daily, Oklahoma City; Southwestern Homeopathic Medical College and Hospital, Louisville, Ky., 1903; member of the Oklahoma State Medical Association; formerly president of the school board and mayor of Owingsville, Ky.; aged 67; died, April 26.

Eustace Cameron Butler ✠ Caldwell, N. J.; Columbia University College of Physicians and Surgeons, New York, 1906; fellow of the American College of Surgeons; attending surgeon, Essex County Hospital, Cedar Grove; aged 60; died, May 12.

Milton Henry Wells ✠ Watertown, Tenn.; University of Nashville Medical Department, 1901; formerly member of the city council and board of health; aged 79; was killed, April 1, when the automobile in which he was driving was struck by a train.

Laura H. Satterthwaite, Trenton, N. J.; Woman's Medical College of Pennsylvania, Philadelphia, 1888; formerly member of the board of trustees of the Jeanes Hospital, Philadelphia; aged 80; died, April 19, of carcinoma of the ascending colon.

Pasquale Ferrari, Pittsburgh; Regia Università di Napoli Facoltà di Medicina e Chirurgia, Italy, 1896; member of the Medical Society of the State of Pennsylvania; aged 70; died, April 29, of arteriosclerosis and chronic valvular heart disease.

John Edward Waaser, East Mauch Chunk, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1893; member of the Medical Society of the State of Pennsylvania; formerly member of the school board; aged 72; died, April 27.

David Edward Froehlich ✠ Oakland, Calif.; Northwestern University Medical School, Chicago, 1921; fellow of the American College of Surgeons; member of the staffs of the Alameda County and Providence hospitals; aged 49; died, April 21.

Joseph Von Culin Roberts, Philadelphia; Medico-Chirurgical College of Philadelphia, 1900; member of the Medical Society of the State of Pennsylvania; aged 70; died recently in the Presbyterian Hospital of a ruptured aorta.

Frank L. Adams, Elberton, Ga.; Southern Medical College, Atlanta, 1890; member of the Medical Association of Georgia; represented Elbert County in the General Assembly of Georgia for a number of terms; aged 74; died, May 3.

Leo Wolfenstein ✠ Cleveland; University of Wooster Medical Department, Cleveland, 1906; at one time associated with the U. S. Public Health Service; formerly on the staff of the Mount Sinai Hospital; aged 68; died, April 3.

Norman McLeod Allen ✠ Detroit; Detroit College of Medicine, 1910; diplomate of the American Board of Surgery; fellow of the American College of Surgeons; aged 59; on the staff of the Harper Hospital, where he died, May 9.

James Joseph Sebastian Walsh ✠ New York; Columbia University College of Physicians and Surgeons, New York, 1901; veteran of the Spanish-American War and World War I; aged 65; died in April in the Union Hospital.

Leighton Randolph Cornman, South Pasadena, Calif.; Columbia University College of Physicians and Surgeons, New York, 1903; aged 63; died, March 14, in North Hollywood of injuries received when struck by an automobile.

Grafton D. P. Bailey, Washington, D. C.; National University Medical Department, Washington, 1896; member of the Medical Society of the District of Columbia; formerly mayor of North Beach, Md.; aged 67; died, May 18.

Daniel D. Costigan, Trinidad, Colo.; Detroit College of Medicine, 1911; member of the Colorado State Medical Society; on the staff of Mount San Rafael Hospital; aged 63; died, April 22, in Pueblo of cerebral hemorrhage.

Abraham David Eisenberg, Brooklyn; Columbia University College of Physicians and Surgeons, New York, 1906; member of the Medical Society of the State of New York; aged 60; died, May 13, of heart disease.

George A. Martin, Lafayette, La.; Medical Department of Tulane University of Louisiana, New Orleans, 1887; formerly mayor, city judge and city physician; at one time member of the school board; aged 81; died, May 6.

Emil Constantine Bernauer ✠ Brooklyn; University of the City of New York Medical Department, New York, 1891; consulting dermatologist to the Wyckoff Heights and Brooklyn State hospitals; aged 72; died, May 25.

Samuel Harvey Corrigan, Lampman, Sask., Canada; Trinity Medical College, Toronto, Ont., 1896; fellow of the American College of Surgeons; aged 71; died, May 1, in Winnipeg of coronary thrombosis.

John W. Reed, Bay City, Texas (licensed in Texas, under the Act of 1907); member of the State Medical Association of Texas; at one time local surgeon for the Aransas Pass Railroad; aged 91; died recently.

Edward Richard Sill, Oakland, Calif.; College of Physicians and Surgeons, medical department of Columbia College, New York, 1889; formerly member of the county board of health; aged 80; died, April 16.

Charles Francis Stack, Boston; Harvard Medical School, Boston, 1898; member of the Massachusetts Medical Society; aged 71; died, April 3, in the Boston City Hospital of arteriosclerotic heart disease.

Joseph Wilbert Shelar, Mount Pleasant, Pa.; Long Island College Hospital, Brooklyn, 1886; on the staff of the Henry Clay Frick Memorial Hospital; aged 82; died, April 18, of cerebral hemorrhage.

Alfred L. Suhr ✠ Milwaukee; Marquette University School of Medicine, Milwaukee, 1927; member of the staff of the Milwaukee County Hospital, Wauwatosa; aged 43; died, April 8, in a local hospital.

Emmett R. Giesey, Harrisburg, Pa. (licensed in Ohio in 1896); at one time mayor and member of the school board of Toronto, Ohio; aged 83; died, April 26, of cerebral hemorrhage and hypertension.

Robert Lee Wills, Neosho, Mo.; Missouri Medical College, St. Louis, 1884; formerly member of the state board of health; aged 79; died, April 29, of chronic myocarditis due to arteriosclerosis.

David Llewellyn Dial, Concord, N. H.; Western Reserve University School of Medicine, Cleveland, 1931; pathologist on the staff of the New Hampshire State Hospital; aged 34; died, April 20.

Minnie Arnold-Huneker, Browns Mills, N. J.; Temple University School of Medicine, Philadelphia, 1912; member of the Medical Society of the State of Pennsylvania; aged 70; died, May 26.

Samuel A. Blauner ✠ New York; Columbia University College of Physicians and Surgeons, New York, 1904; attending pediatrician on the staff of the Lebanon Hospital; aged 60; died, May 17.

Roy Sumner Wells ✠ Colville, Wash.; Rush Medical College, Chicago, 1900; formerly secretary of the Stevens County Medical Society; aged 65; died, April 5, of heart disease and arthritis.

Silas Elliott Woods, San Benito, Texas; Marion-Sims College of Medicine, St. Louis, 1894; aged 74; died, April 18, in the Valley Baptist Hospital, Harlingen, of coronary thrombosis.

Christian Martz, Fort Wayne, Ind.; Hahnemann Medical College and Hospital, Chicago, 1882; aged 88; died, May 23, in the Lutheran Hospital of cardiorenal disease and pneumonia.

Joseph P. Werner, O'Fallon, Mo.; St. Louis College of Physicians and Surgeons, 1906; aged 64; died, April 1, in the Firmin Desloge Hospital, St. Louis, of carcinoma of the liver.

William Roane Aylett, Tappahannock, Va.; University of Virginia Department of Medicine, Charlottesville, 1895; member of the Medical Society of Virginia; aged 70; died recently.

Addie Board-Arthur, Kansas City, Mo.; Woman's Medical College, Kansas City, Mo., 1899; aged 71; died, April 30, of hemopericardium following rupture of the heart.

Robert Martin Powers, New Kensington, Pa.; Western Pennsylvania Medical College, Pittsburgh, 1890; aged 80; died, April 1, of arteriosclerosis and chronic nephritis.

Samuel Newell Watson, Santa Barbara, Calif.; State University of Iowa College of Homeopathic Medicine, Iowa City, 1893; also a clergyman; aged 81; died recently.

Lawrence C. Creighton ✠ Unity, Pa.; College of Physicians and Surgeons, Baltimore, 1908; bank president; aged 62; died, May 3, of chronic valvular heart disease.

Albert Nelson Oyen ✠ Chicago; Rush Medical College, Chicago, 1905; on the staff of the Lutheran Deaconess Hospital; aged 63; died, April 19, in Orlando, Fla.

Walter Everly, Seattle; Rush Medical College, Chicago, 1902; served as a major in the medical corps of the U. S. Army during World War I; aged 64; died, April 8.

Alva M. Ashcraft, Leesville, Ohio; Baltimore Medical College, 1903; member of the Ohio State Medical Association; aged 61; died, April 29, of diabetic gangrene.

William H. Walker, Omaha; John A. Creighton Medical College, Omaha, 1901; aged 72; died, April 14, in the Nicholas Senn Hospital of hypertensive heart disease.

Charney Cale, Mobile, Ala.; Memphis (Tenn.) Hospital Medical College, 1904; aged 66; died, April 23, in a local hospital of bronchopneumonia and asthma.

Harry Howard Hanna, Waterloo, Iowa; Rush Medical College, Chicago, 1888; aged 78; died, April 20, in the Presbyterian Hospital of cerebral thrombosis.

Louis Montrose Haight, Stockton, Calif.; Cooper Medical College, San Francisco, 1903; member of the California Medical Association; aged 73; died, April 27.

Charles Walter Winne, Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1903; aged 65; died, April 8.

Ernest B. Baker, Edcouch, Texas; Tulane University of Louisiana School of Medicine, New Orleans, 1896; aged 70; died in April of carcinoma of the colon.

Malcolm Ferguson, Toronto, Ont., Canada; Trinity Medical College, Toronto, 1892; L.R.C.P., Ireland, and L.R.C.S., Ireland, 1892; aged 79; died, March 2.

Kenneth William Davis, Green Bay, Wis.; University of Wisconsin Medical School, Madison, 1933; aged 33; died, April 24, of accidental paraldehyde poisoning.

LeRoy S. Colter, Glendale, Ohio; Miami Medical College, Cincinnati, 1888; formerly on the staff of the Christ Hospital, Cincinnati; aged 80; died, March 23.

William Western Warren, Newport, Ohio; Columbus Medical College, 1889; member of the Ohio State Medical Association; aged 73; died, April 4.

Almerin Webster Baer, Gary, Ind.; Rush Medical College, Chicago, 1889; aged 80; died, May 11, in the Methodist Hospital of cerebral hemorrhage.

Clarence Porter Macdonald ✦ Pittsburgh; Western Pennsylvania Medical College, Pittsburgh, 1907; aged 61; died, March 15, in Miami Beach, Fla.

Jesse Linus Stowers, Clinton, Ind.; Indiana Medical College, School of Medicine of Purdue University, Indianapolis, 1906; aged 77; died, April 26.

Arthur Vincent Payne, New York; New York University Medical College, New York, 1897; aged 76; died recently at his home in Brooklyn.

Grant Judson Gray, Oakridge, Ore.; Cleveland University of Medicine and Surgery, 1894; served during World War I; aged 87; died, April 27.

Archibald Franklin Malloy, Saskatoon, Sask., Canada; University of Toronto Faculty of Medicine, Toronto, 1904; aged 63; died, April 20.

Edmund Lee Awtry, Atlanta, Ga.; Southern Medical College, Atlanta, 1896; aged 73; died, May 22, of cerebral hemorrhage and hypertension.

Joseph Malvern Douthett, Pittsburgh; Bellevue Hospital Medical College, New York, 1890; aged 78; died, April 28, of cerebral hemorrhage.

Otto Clarence Benage, Conway, Mo.; St. Louis College of Physicians and Surgeons, 1901; aged 66; died, April 24, of coronary occlusion.

John Willis Baker, Enid, Okla.; Northwestern Medical College, St. Joseph, Mo., 1893; aged 73; died, April 30, of coronary embolism.

Richard Kershner Loewen ✦ Boyertown, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1919; aged 49; died, May 10.

William Edward Miller, Ludowici, Ga.; College of Physicians and Surgeons, Baltimore, 1898; aged 72; died in April in Walthourville.

Moritz Muldberg, New York; University of the City of New York Medical Department, New York, 1888; aged 74; died, April 14.

James William Urie, Kennedyville, Md.; Hahnemann Medical College and Hospital of Philadelphia, 1886; aged 78; died, April 14.

J. Andrew Harper, Crawfordville, Fla.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1902; aged 75; died, April 10.

Otto Victor Wille, Iowa City; State University of Iowa College of Medicine, Iowa City, 1912; aged 58; hanged himself, April 19.

William F. Dickinson, Queen Anne, Md.; Geneva (N. Y.) Medical College, 1867; aged 99; died, April 21, of chronic myocarditis.

Isaac Kupperman, Newark, N. J.; Long Island College Hospital, Brooklyn, 1905; aged 67; died, April 28, of coronary thrombosis.

Osborne Lee Moore, Jefferson City, Mo.; University Medical College of Kansas City, Mo., 1891; aged 78; died, April 18.

John Percival McKinnon, Guelph, Ont., Canada; University of Toronto Faculty of Medicine, 1904; aged 70; died recently.

William Henry Smithson, New Park, Pa.; University of Maryland School of Medicine, Baltimore, 1905; aged 64; died, April 6.

Wiley Schell Millyard, Coboconk, Ont., Canada; University of Toronto Faculty of Medicine, 1908; aged 57; died, April 9.

John E. Alford, Okoloma, Ark.; Gate City Medical College, Dallas, Texas, 1906; aged 70; died, May 11, of heart disease.

Joseph Bondi, New York; Medizinische Fakultät der Universität Wien, Austria, 1896; aged 70; died, April 29, of heart disease.

Julia Clayson Eberle, Indianapolis; Hahnemann Medical College and Hospital, Chicago, 1889; aged 93; died, May 17.

Charles Edmond West, Salina, Utah; Physio-Medical College of Indiana, Indianapolis, 1885; aged 78; died, April 11.

Hampton D. Book, Henderson, Ky.; University of Louisville (Ky.) Medical Department, 1884; aged 81; died, April 29.

Edward Melchers ✦ Toledo, Ohio; Medical College of Ohio, Cincinnati, 1878; aged 85; died, May 18, of myocarditis.

Samuel Harvey Keefauver, Washington, D. C.; Miami Medical College, Cincinnati, 1882; aged 81; died, April 23.

Alvin Everett Reed, Weir, Miss.; University of Nashville (Tenn.) Medical Department, 1905; aged 62; died recently.

Oram Alonzo Nincehelser, Mechanicsburg, Ohio; Miami Medical College, Cincinnati, 1887; aged 84; died, April 6.

Grover C. Stover, Thornburg, Ark. (licensed in Arkansas in 1908); aged 56; died recently of valvular heart disease.

William G. Bower, Myerstown, Pa.; Jefferson Medical College of Philadelphia, 1887; aged 82; died in May.

Alonzo Benjamin Davis, Philadelphia; Medico-Chirurgical College of Philadelphia, 1896; aged 68; died recently.

Samuel G. Sevier, Oenaville, Texas; Kentucky School of Medicine, Louisville, 1889; aged 87; died, April 26.

Samuel Perry Gwaltney, Rockport, Ind.; Eclectic Medical Institute, Cincinnati, 1894; aged 77; died, May 7.

Keith Maurice Morris ✦ Saginaw, Mich.; Saginaw Valley Medical College, 1903; aged 59; died in April.

S. Morton Pleak, Murfreesboro, Ark.; Keokuk (Iowa) Medical College, 1897; aged 71; died, April 6.

Alfred Laflin Buck, Chicago; Jenner Medical College, Chicago, 1914; aged 57; died suddenly, May 22.

Silas B. Post, Pittsburgh; Jefferson Medical College of Philadelphia, 1882; aged 84; died, April 28.

Edward Louis Fox, Houston, Texas; Rush Medical College, Chicago, 1892; aged 73; died recently.

Joseph Pierpont Gillen, Denver; Miami Medical College, Cincinnati, 1885; aged 82; died, April 21.

Louis Richardson, Jump River, Wis.; Omaha Medical College, 1890; aged 80; died, April 19.

Aaron Emmons, Scotland, Ark. (licensed in Arkansas in 1903); aged 64; died recently.

Bureau of Investigation

CEASE AND DESIST ORDERS

Abstracts of Certain Federal Trade Commission Releases

The work of the Federal Trade Commission, in helping to protect the public against misrepresentation or fraud in the medical as well as other fields, has been greatly extended by the provisions of the Wheeler-Lea Amendment to the Federal Trade Commission Act. The Food, Drug and Cosmetic Act of 1938 added to the Food and Drug Administration's control of the advertising claims and statements made on the labels or on the carton or in the accompanying leaflet, whereas what might be termed collateral advertising, that which appears in newspapers and magazines and over the air, comes more actively under the purview of the Federal Trade Commission by virtue of the Wheeler-Lea Amendment.

THE JOURNAL has at various times commented on the activities of the Federal Trade Commission in this connection, even before the Wheeler-Lea Amendment gave it its added rights. In some cases the Commission may accept from the person or concern involved a stipulation that the objectionable practices or claims cited will be discontinued. In other cases the Commission issues what is known as a Cease and Desist Order, in which the individual or company cited is ordered to cease and desist from practices which have been declared objectionable. Abstracts of some orders issued in 1941 and 1942 follow:

Aspironal.—This is a product of J. D. Jacobs and P. W. Smith, who do business as the Aspironal Company, Atlanta, Ga. In December 1941 the Federal Trade Commission ordered them to cease representing that "Aspironal" is a cure or remedy for the common cold, contains an effective amount of aspirin or is of any value exceeding that of temporary relief from pain and discomfort. The Commission also ordered these persons to discontinue any advertisements which did not reveal that the product should not be used by persons suffering from nausea, vomiting, abdominal pains or other symptoms of appendicitis. As an alternative, however, Smith and Jacobs were permitted to place on the packages the warning: "Caution, Use Only as Directed." Back in 1935 the Commission also had taken action against the Aspironal Laboratories, Inc., of Atlanta (apparently the same concern), as a result of which that firm signed a stipulation promising that it would cease alleging that its Aspironal was a competent treatment or remedy for hay fever, coughs, catarrhal croup or choking and that it would relieve congestion. Still earlier (1920) a specimen of Aspirinol put out by the Aspironal Laboratories of Atlanta had been declared in a district federal court to bear false and fraudulent representations as to its efficacy in rheumatism, neuralgia, headaches and la grippe, among other things. Government chemists reported that the nostrum then consisted essentially of "a solution containing sodium salicylate, cascara, a small amount of mydriatic alkaloids (probably from belladonna), and a trace of menthol."

Davis' Formula No. 7895.—That this preparation is a cure or remedy for asthma or has any value in excess of temporary relief from the paroxysms thereof or that it is a cure or remedy for hay fever or offers any benefit in this condition, or will prevent attacks of asthma or hay fever or prevent their occurrence were misrepresentations which the Federal Trade Commission in January 1942 ordered E. R. Davis, trading as E. R. Davis Prescription Company, Bellingham, Wash., to discontinue in his advertising. Nearly three years previously (May 1938) Davis had signed another stipulation with the Commission agreeing that in the sale of Davis' Formula No. 7895 and "Vitamin A Concentrate" he would no longer represent that these would cure asthma, prevent hay fever and build up the mucous membrane of the nose and that such products have given relief after all other treatments have failed.

Kas-Mo Salve.—In December 1941 the Federal Trade Commission ordered G. J. Tritico, trading as Kas-Mo Remedy Company, Port Arthur, Texas, to discontinue the following misrepresentations in his advertising of this product: that it is a cure or remedy for pimples, boils, carbuncles, external eruptions of the skin, chronic sores, or irritations caused by bad blood or insect bites, that it has any therapeutic value in the treatment of rectal irritations in excess of furnishing temporary relief, and that use of the preparation will prevent the spread of infection.

Lariviere's (Dr. J.) Vegetable Compound.—In November 1941 the Federal Trade Commission ordered Ferd T. Hopkins, trading as D. Watson & Company and as Colonnade Advertising Agency, New York, to discontinue the following advertising misrepresentations which the Commission declared false, deceptive and misleading: that this preparation is a competent or effective treatment for painful menstruation, that it will build up resistance to restlessness, nervousness, cramps, headaches or fainting spells and that restlessness, nervousness or moody spells in young women are symptoms of dangerous periods imperiling health.

Magnetic Ray.—This is an electrical device put out by one Frank B. Moran of Dallas, Texas, who does business under the names Magnetic Ray Company and Magnetic Ray Clinic. In December 1941 the Federal Trade Commission ordered Moran to discontinue misrepresentations in his advertising of the "Magnetic Ray" as follows: that the device stimulates healthful function of the various organs and glands and causes rapid increase in the oxidation and elimination of accumulated poisons, thereby removing the condition of autotoxemia; that the Magnetic Ray exceeds electricity, light, heat, x-rays or radium rays in therapeutic value; that its use stimulates the normal and healthful functioning of the various organs and glands of the body or equalizes the circulation of the human blood, relieving congestion or lack of blood supply in any part of the body, or that its use stimulates rapid increase in the oxidation and elimination of accumulated poisons, thereby removing the condition of autotoxemia.

Middlebrook's Nostrums.—These are put out by a James R. Middlebrook, M.D., who operates the questionable Middlebrook Hospital and Clinic at Del Rio, Texas, an institution that has played up its work in prostatic disorders. Middlebrook has sold a "Special Prostate Package for Home Treatment." The latter includes "Calomel, Rhubarb and Colocynth Compound," "Special Formula No. 17831" and "Methenamine (7½ Grains)." In December 1941 the Federal Trade Commission ordered Middlebrook to cease representing that any one of these preparations or the combination of them will relieve pain or soothe or heal the affected parts involved in kidney, bladder, prostatic or rectal diseases; that his Methenamine is one of the best urinary antiseptics for cleansing infection or inflammation from the kidneys, bladder, prostate or urethral canal; that the Special Formula No. 17831 medicates or penetrates the prostate gland by absorption through the tissues in sufficient quantities to be effective; and that the price at which the "Special Package" is offered for sale constitutes a reduced or introductory price, whereas the fact is that this is the price which Middlebrook customarily charges. Further, the Commission ordered Middlebrook to discontinue any advertisements which fail to reveal that the Calomel, Rhubarb and Colocynth Compound is a cathartic and should not be used by persons suffering from nausea, vomiting and abdominal pains or other symptoms of appendicitis; provided, however, that it will be sufficient to insert in the advertisements the warning "Caution, use only as directed" when the labeling itself is sufficiently cautionary about the use of the product in the conditions stated.

Old Surgeon's Nostrums.—These are put out by Hiram Carter, Inc., Elmhurst, N. Y., and S. Fred Griffin, president and principal owner of the corporation. In January 1942 the Federal Trade Commission ordered them to discontinue the following misrepresentations in their advertising: that Old Surgeon's preparations constitute a cure, remedy or effective treatment for impotence, loss of energy, indigestion, asthenia or neurasthenia, will prevent premature old age or beneficially affect glands, nerves or organs; that they are a cure or remedy for neuritis, arthritis or other forms of rheumatism or will give more than temporary, partial relief from the symptoms of pain or that they have any therapeutic value beyond that of a laxative or analgesic in the treatment of any other disorders except in cases of anemia due to iron deficiency or in certain conditions resulting from a deficiency of thiamin chloride, riboflavin or nicotinic acid, where such deficiency is adequately supplied by these preparations. The Commission further ordered the promoters to cease representing that their usual prices are "special" or "reduced" ones and that their business facilities are greater than is the fact.

Queen Brand Capsules.—This product, also known as "Shrader's Queen Brand Capsules," is put out by a Charles Shrader who does business under the name Queen Chemical Company, Mount Lebanon, Pittsburgh. The Federal Trade Commission learned that the product contains apiol, ergot, aloin and oils of savin and pennyroyal in quantities sufficient to cause irreparable injury to health if taken under the usual conditions or those prescribed in the advertisements. In December 1941 the Commission ordered Shrader to cease representing that these capsules are a safe and effective treatment for delayed, suppressed, irregular, painful and scanty menstruation and other derangements. The Commission also ordered him to discontinue any advertisement which failed to reveal that the use of these capsules may cause gastrointestinal disturbances, pelvic congestion, excessive uterine hemorrhages and, in cases of pregnancy, may result in infection of the pelvic organs and blood poisoning.

Sterling Capsules.—This is a product of Nature's Herb Company, San Francisco, which, in January 1942 was ordered by the Federal Trade Commission to discontinue certain advertising misrepresentations. Among these were that the product constitutes a cure for or has therapeutic value in the treatment of various forms of rheumatism such as arthritis and sciatica, aside from its mild, temporary action as an analgesic and laxative. The order further prohibited advertisements which failed to reveal that use of the product may be injurious unless its dosage is limited to a period of two or three days, that it should not be taken by persons suffering from nausea, vomiting, abdominal pains or other symptoms of appendicitis; provided, however, that if the directions on the label contain warnings of these potential dangers, it would be sufficient for the advertising to include only the warning: "Caution, use only as directed."

Ton Jon.—This preparation, put out by Grant T. Whiteside, trading as Grant Company, Sabina, Ohio, comes in three forms, designated as Nos. 1, 2 and 3. In December 1941 the Federal Trade Commission ordered Whiteside to discontinue the following misrepresentations in the sale of his product: that "No. 1" is an effective treatment for numerous disorders of the bowels and stomach; that "No. 2" is a powerful remedy for ailments of the liver and gallbladder or will bring relief from impurities of the blood and kindred conditions, and that "No. 3" is a competent treatment for kidney and prostatic disorders and will give relief from bladder irritation or accomplish better results than any medicine has done before. Whiteside also was ordered to discontinue any advertisements which failed to reveal that either No. 1 or No. 2 may be dangerous when used by persons suffering from nausea, vomiting, abdominal pains and other symptoms of appendicitis, unless he substituted a warning to that effect on the labels of these mixtures.

Correspondence

ESSENTIAL HYPERTENSION

To the Editor:—In The Journal, April 25, page 1525, appears an answer to a query concerning chronic active glomerulonephritis. The author employs the term essential hypertension. Some speak of essential hypertension if they are unable to demonstrate the factors that are producing hypertension. One might just as well call a person who has lost his legs a pedestrian because he has no feet to walk on. A rather loose diction is used when the author states that part of the treatment consists in careful periodic examinations including tests of renal function and study of the sediment of concentrated urine. Correctly, these procedures are classified as diagnostic and not as therapeutic activities. The author evidently does not believe in a differentiation between nephritic and nephrotic conditions. Only on this basis can be explained his statement that the foundation of the treatment of renal edema is a low salt intake. A characteristic feature of nephrotic conditions is the retention of chlorides within the tissues, which accumulation leads to the attraction and retention of water. As a further consequence, this condition influences the chemical constitution of the nephrotic edema, which contains chlorides but no albumin. The nephritic edema contains proteins but no inorganic salts. In nephritic conditions appears a retention of the organic metabolic end products; therefore, reducing the salt intake in a nephritic patient is not only without any physiologic indication but may also be harmful.

The endocrine glands that control the elimination of the organic metabolic end products require a goodly quantity of salts for maintaining their functions. The human body under all conditions will eliminate salts. In nephritic conditions, unlike nephrotic conditions, there are no salt deposits accumulated in the structures to draw on. Therefore, depriving a nephritic patient of his proper salt intake may increase the retention of organic metabolic end products with all its undesirable sequelae. It is also not quite clear how the author executes his advice that reduction of dietary protein is indicated only if the patient is unable to eat. The author states that out of many of the diuretics acid forming salts and the organic mercurials give the best results in the treatment of chronic renal edema. It is true enough that in mild forms of nephrotic conditions mercurial compounds may be used to advantage. But in pronounced lipoid nephrosis bad results are reported following the administration of such drugs. In nephritic conditions the administration of mercurial compounds is strictly contraindicated and their use constitutes a grave therapeutic error. The old rule still holds good that rational therapy must be based on a clear understanding of the normal and pathologic physiology of the organs concerned.

Gustav Kolischer, M.D., Chicago.

Note.—The term "essential hypertension" is so clearly understood by most physicians as to require no defense. Its chief value lies in the absence of specific etiologic implications. There is no objection, however, to omitting its use and substituting the term "hypertensive vascular disease." In the vast majority of cases of hypertension in the earlier stages of the disease, causative factors are not demonstrable.

The correspondent's statements concerning the difference between nephrotic and nephritic edemas are erroneous, because every type of edema fluid contains inorganic salts, chiefly sodium chloride. Therefore, restriction of salt in the diet is the mainstay of treatment, regardless of the underlying disease. True, such restriction may harm a nephritic patient when the serum sodium and chloride have been greatly reduced as a result of vomiting, excessive urinary loss of salt, severe diarrhea, acute infection or other extrarenal conditions. In these instances there is usually little or no edema, and the patient may be treated like other patients with hypochloremia. It is the dehydration rather than the low serum chloride that is harmful to renal function, as has been shown repeatedly in both human and animal experiments.

Use of mercurials in treatment of chronic nephritic edema is well established. It is contraindicated only in the presence of acute hemorrhagic nephritis or considerable renal insufficiency. If one should follow the correspondent's advice and limit the use of mercury to the pure nephrotic type of renal disease one might as well discard the drug entirely, since practically all cases of chronic renal edema which require treatment are part of a nephritic process. In the absence of cardiac failure, acute nephritis or uremia, the edema in renal disease is always on a nephrotic basis; that is, due to albuminuria and low plasma albumin.—Ed.

MORTALITY FROM GOUT

To the Editor:—During the last ten years there were 2,400 deaths attributed to gout in England and Wales, of which five sixths were of men. During the same period, 1930-1939, there were 25 deaths allocated to this cause in the United States, of which two thirds were of men. Allowing for the difference in population, this would be about 10 as compared with 2,400 in England and Wales. Thus the deaths in this country are only about one two-hundredth of the corresponding deaths in England.

I doubt whether such a remarkable contrast could be found for any other cause of death. This is the more noteworthy because such a large part of our population are of British descent and in many respects the two groups are of a similar nature.

It has been suggested that in Great Britain they have attributed a number of deaths to gout which in this country would be included under chronic rheumatism. It has also been suggested that we do not have a leisure class similar to the upper class of Great Britain. However, there are not nearly enough of the latter to cause 200 deaths a year. That would take several hundred thousand persons over a long period of time.

Walter G. Bowerman, Assistant Actuary,
51 Madison Avenue, New York.

REPRINT COURTESY

To the Editor:—Authors of scientific articles take pride in sending reprints to their medical friends and to libraries; they are also pleased to receive letters of comment with a request for a reprint. But they all tire sooner or later of responding to the free reprint collector who sends a form postcard with his name stamped on or who scribbles his request on a penny postcard. Authors spend many weary hours writing their article and getting it into print; they have to pay for the reprints, envelops and stamps unless they are sagacious enough to carry on under the auspices of some foundation. So it would seem elementary courtesy on the part of a medical man in quest of a reprint to write on his own stationery and to enclose a return postage stamp. Only a few physicians do this. Under the increasing economic duress, most authors in the future will have to ignore what has developed into the penny postcard reprint racket.

Richard Kovacs, M.D., New York.

Council on Medical Education and Hospitals

REPORT OF MEETINGS OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS, HELD IN ATLANTIC CITY, N. J., JUNE 6 AND 10, 1942

The status of the University of Georgia School of Medicine was unchanged by the Council on Medical Education and Hospitals of the American Medical Association. The action taken in February 1942 in withdrawing approval of the school was taken without prejudice to any students in the college in September 1942. The present status of the school is such that it would not affect the graduates of the school until after September 1945.

The Council voted, after reviewing conditions at the University of Texas Medical Branch, Galveston, to place the school on probation.

The accelerated program adopted by the medical schools of the country as a war measure was presented to the Council. Sixty-one medical schools have adopted the accelerated program, of which fifty will admit a class every nine months and eleven, although adopting the accelerated curriculum plan, will admit only one class each year.

The Council is prepared to cooperate with the Procurement and Assignment Service in any way possible.

Section I, Administration, of the Essentials of an Acceptable School for Clinical Laboratory Technicians was amended by addition of the words "approved medical schools," the amended section to read:

1. Acceptable schools for training laboratory technicians may be conducted by approved medical schools, general hospitals, or state health laboratories affiliated with hospitals, where the majority of the student's practical training is received. This arrangement should not discourage affiliation between the hospital and universities, colleges, public health or other hospitals.

The Council at this meeting took action as follows regarding hospitals for intern training and for residencies and fellowships, as well as schools for the training of clinical laboratory and physical therapy technicians:

Hospitals Approved for Intern Training

Doctors Hospital, Washington, D. C.
Orange General Hospital, Orlando, Fla.
Pensacola Hospital, Pensacola, Fla.
St. Elizabeth Hospital, Lafayette, Ind.
Rockaway Beach Hospital and Dispensary, Rockaway Beach, N. Y.
North Carolina Baptist Hospital, Winston-Salem.

Approved Residencies and Fellowships

Gynecology

Hospital of the Woman's Medical College of Pennsylvania.

Malignant Diseases

State Institute for the Study of Malignant Diseases, Buffalo.

Medicine

Norwood Hospital, Birmingham, Ala.
Fitzsimons General Hospital, Denver.
George Washington University Hospital, Washington, D. C.
St. Francis Hospital, Peoria, Ill.
St. Mary's Hospital, Detroit.
Woman's Hospital, Detroit.
Blodgett Memorial Hospital, Grand Rapids, Mich.
St. Anthony's Hospital, St. Louis.
Greenpoint Hospital, Brooklyn.
St. Luke's Hospital, New York City.
St. Mary's Hospital, Rochester, N. Y.
North Carolina Baptist Hospital, Winston-Salem.
Bryn Mawr Hospital, Bryn Mawr, Pa.
Philadelphia General Hospital, Philadelphia.
Hermann Hospital, Houston, Texas.
Southern Pacific Hospital, Houston, Texas.
Virginia Mason Hospital, Seattle.

Mixed

South Highlands Infirmary, Birmingham, Ala.
Clinic Hospital (Caylor-Nickel Clinic), Bluffton, Ind.
St. Mary's Hospital, Evansville, Ind.

Neurosurgery

Passavant Memorial Hospital, Chicago.
University Hospitals, Minneapolis.

Obstetrics

Employees' Hospital of the Tennessee Coal, Iron and Railroad Company, Fairfield, Ala.
Henrotin Hospital, Chicago.
Methodist Hospital, Indianapolis.
Fairview Park Hospital, Cleveland.

Obstetrics and Gynecology

Women and Children's Hospital, Chicago.
St. Mary's Hospital, Detroit.
Temple University Hospital, Philadelphia.
Hermann Hospital, Houston, Texas.

Ophthalmology

Wesley Memorial Hospital, Chicago.
Philadelphia General Hospital, Philadelphia.

Otolaryngology

Mercy Hospital, Pittsburgh.
Vanderbilt University Hospital, Nashville, Tenn.

Pathology

Santa Barbara Cottage Hospital, Santa Barbara, Calif.
Beth Israel Hospital, New York.
Welfare Hospital for Chronic Diseases, New York.
Samaritan Hospital, Troy, N. Y.
City Hospital, Akron, Ohio.
Emanuel Hospital, Portland, Ore.
Tacoma General Hospital, Tacoma, Wash.
Gorgas Hospital, Ancon, Canal Zone.

Pediatrics

Norwood Hospital, Birmingham, Ala.
North Carolina Baptist Hospital, Winston-Salem.
Jefferson Davis Hospital, Houston, Texas.

Radiology

White Memorial Hospital, Los Angeles.
Jackson Memorial Hospital, Miami, Fla.
Mount Sinai Hospital, Chicago.
St. Margaret's Hospital, Hammond, Ind.
Shreveport Charity Hospital, Shreveport, La.
North Carolina Baptist Hospital, Winston-Salem.
Virginia Mason Hospital, Seattle.

Surgery

Women and Children's Hospital, Chicago.
Greenpoint Hospital, Brooklyn.
North Carolina Baptist Hospital, Winston-Salem.
Bryn Mawr Hospital, Bryn Mawr, Pa.
Hospital of the Woman's Medical College of Pennsylvania, Philadelphia.
Lankenau Hospital, Philadelphia.

Thoracic Surgery

Triboro Hospital, Jamaica, N. Y.
North Carolina Baptist Hospital, Winston-Salem.

Tuberculosis

Undercliff, Meriden State Tuberculosis Sanatorium, Meriden, Conn.
Indianapolis City Hospital, Indianapolis.
Nassau County Sanatorium, Farmingdale, N. Y.
Triboro Hospital, Jamaica, N. Y.

Schools for Clinical Laboratory Technicians Approved

Hillman Hospital, Birmingham, Ala.
St. Margaret's Hospital, Montgomery, Ala.
Crawford W. Long Memorial Hospital, Atlanta, Ga.
Georgia Baptist Hospital, Atlanta, Ga.
St. Elizabeth's Hospital, La Fayette, Ind.
Kentucky Baptist Hospital, Louisville, Ky.
Charles Godwin Jennings Hospital, Detroit.
Mount Carmel Mercy Hospital, Detroit.
St. Mary's Hospital, Detroit.
Borgess Hospital, Kalamazoo, Mich.
Bronson Methodist Hospital, Kalamazoo, Mich.
Michigan Department of Health, Lansing, Mich.
Wyandotte General Hospital, Wyandotte, Mich.
St. John's Long Island City Hospital, New York.
St. Vincent's Hospital, Toledo, Ohio.
Mercy Hospital, Johnstown, Pa.
Medical College of State of South Carolina, Charleston.

Schools for Physical Therapy Technicians Approved

College of Medical Evangelists, Los Angeles.
Barnes Hospital, St. Louis.

H. G. WEISKOTTEN, Secretary.

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

CHICAGO, Feb. 15-16, 1943. Sec., Council on Medical Education and Hospitals, Dr. H. G. Weiskotten, 535 North Dearborn Street, Chicago.

NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and Examining Boards in Specialties were published in THE JOURNAL, June 27, page 747.

BOARDS OF MEDICAL EXAMINERS

ARIZONA:* Phoenix, July 7-8. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

CALIFORNIA: *Written.* Los Angeles, July 27-30. *Oral examination* (required when reciprocity application is based on a state certificate or license issued ten or more years before filing application in California), Los Angeles, Sept. 16. Sec., Dr. Charles B. Pinkham, 1020 N St., Sacramento.

CONNECTICUT:* *Medical,* Hartford, July 14-15. *Endorsement.* Hartford, July 28. Sec. to the Board, Dr. Creighton Barker, 258 Church St., New Haven. *Homeopathic.* Derby, July 14-15. Sec., Dr. Joseph H. Evans, 1488 Chapel St., New Haven.

DELAWARE: Dover, July 14-16. Sec., Medical Council of Delaware, Dr. Joseph S. McDaniel, 229 S. State St., Dover.

DISTRICT OF COLUMBIA:* Washington, Nov. 9-10. Sec., Commission on Licensure, Dr. George C. Ruhland, 6150 East Municipal Bldg., Washington.

HAWAII: Honolulu, July 13-16. Sec., Dr. James A. Morgan, 55 Young Bldg., Honolulu.

IDAHO: Boise, July 14. Dir., Bureau of Occupational Licenses, Mr. Walter Curtis, 355 State Capitol Bldg., Boise.

ILLINOIS: Chicago, Oct. 13-15. Superintendent of Registration, Mr. Philip M. Harman, Department of Registration and Education, Springfield.

MAINE: Augusta, July 7-8. Sec., Dr. Adam P. Leighton, 192 State St., Portland.

MASSACHUSETTS: Boston, July 14-17. Sec., Dr. H. Q. Gallupe, 413-F State House, Boston.

MONTANA: Helena, Oct. 6. Sec., Dr. Otto G. Klein, First National Bank Bldg., Helena.

NEVADA: *Reciprocity.* Carson City, Aug. 3. Sec., Dr. Frederick M. Anderson, 215 N. Carson St., Carson City.

NEW HAMPSHIRE: Concord, Sept. 10-11. Sec., Board of Registration in Medicine, Dr. T. P. Burroughs, State House, Concord.

NEW MEXICO:* Santa Fe, Oct. 13-14. Sec., Dr. LeGrand Ward, 135 Sena Plaza, Santa Fe.

NORTH DAKOTA: Grand Forks, July 7-10. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.

OHIO: *Endorsement.* July 7. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OREGON:* Portland, July 22-24. Application must be on file not later than July 9. Exec. Sec., Miss Lorienne M. Conlee, 608 Failing Bldg., Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 7-11. Act. Sec., Bureau of Professional Licensing, Mrs. Marguerite G. Steiner, 358 Education Bldg., Harrisburg.

RHODE ISLAND:* Providence, July 2-3. Chief, Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH DAKOTA:* Pierre, July 21-22. Dir., Medical Licensure, Dr. J. F. D. Cook, State Board of Health, Pierre.

WEST VIRGINIA: Charleston, July 6-8. Commissioner, Public Health Council, Dr. C. F. McClintic, State Capitol, Charleston.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

DISTRICT OF COLUMBIA: Washington, Oct. 19-20. Sec., Commission on Licensure, Dr. George C. Ruhland, 6150 East Municipal Bldg., Washington.

IOWA: Des Moines, July 14. Dir., Division of Licensure & Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines.

NEBRASKA: Lincoln, Oct. 6-7. Dir., Bureau of Examining Boards, Mrs. Jeannette Crawford, 1009 State Capitol Bldg., Lincoln.

OKLAHOMA: Oklahoma City, May, 1943. Sec., Dr. Oscar C. Newman, Shattuck.

RHODE ISLAND: Providence, Aug. 19. Chief, Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

Idaho January Report

The Idaho State Medical Examining Board reports the written examination for medical licensure held at Boise, Jan. 13, 1942. The examination covered 10 subjects and included 100 questions. An average of 75 per cent was required to pass. Three candidates were examined, all of whom passed. The following schools were represented:

School	PASSED	Year Grad.	Number Passed
University of Colorado School of Medicine		(1937)	1
Rush Medical College		(1937)	1
Tufts College Medical School		(1936)	1

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Hospitals: Liability for Pneumonia and Tuberculosis Following Hydrotherapy Treatments.—The plaintiff was suffering from a common cold and entered the defendant sanatorium. She was given hydrotherapy treatments. Subsequently pneumonia and then tuberculosis developed. Attributing these conditions to the negligence of the sanatorium, she brought suit against the institution. The trial court entered judgment against her, whereupon she appealed to the Supreme Court of Colorado.

The plaintiff's complaint alleged that the sanatorium was negligent in giving her "certain hydrotherapy treatments, which treatments consisted of hot baths and hot water treatments, and thereafter failing to take reasonable precautions to observe whether or not the plaintiff was thoroughly dried before placing her in an open and extremely cold hospital room." Assuming, said the Supreme Court, that the hydrotherapy treatment was negligently given, followed by a lack of precautionary measures, there remains the question as to whether the negligence was the proximate cause of the pneumonia and tuberculosis. In order to sustain a charge of negligence as a basis for a legal remedy, the court pointed out, the charge must be fortified by reasonable certainties and not left open to conjecture and speculation. Furthermore, where the record is devoid of any evidence showing a probability of proximate cause, the question is one of law for the court, not of fact for the jury. In this case the court could find no evidence from which the jury could properly have found that the hydrotherapy treatment given by the sanatorium attendant, and other alleged acts of carelessness, were the "cause which in natural and continued sequence, unbroken by any efficient intervening cause, produced" the pneumonia, and subsequently the tuberculosis. The most that could be said from all the evidence, including that of the medical expert who testified for the plaintiff, was that there was a possibility that the treatment may have been the cause. This was not sufficient. The contention that the undisputed medical evidence to the effect that it was *possible* for the exposure to have precipitated the pneumonia was equivalent to *probable* was in the opinion of the court untenable. The judgment in favor of the defendant was therefore affirmed. —*O'Connor v. Boulder Colorado Sanitarium Ass'n, 111 P. (2d) 633 (Colo., 1941).*

Criminal Abortion: Conviction Under Habitual Criminal Act in Relation to Prior Pardoned Offense.—Where defendant, an osteopath, was convicted in California of the crime of embezzlement and after having served his sentence was pardoned by the governor of that state "in order to restore his citizenship," and when subsequently, in Minnesota, he was convicted of the crime of performing an illegal operation, the prior pardon, in the opinion of the Supreme Court of Minnesota, was no bar to the imposition of a double sentence under the habitual criminal act of Minnesota.—*State v. Stern, 297 N. W. 321 (Minn., 1941).*

Society Proceedings

COMING MEETINGS

Montana, Medical Association of, Missoula, July 8-10. Dr. Thomas F. Walker, 206 Medical Arts Bldg., Great Falls, Secretary.

Utah State Medical Association, Provo, Aug. 27-29. Dr. D. G. Edmunds, 610 McIntyre Bldg., Salt Lake City, Secretary.

Washington State Medical Association, Spokane, Aug. 17-19. Dr. V. W. Spickard, 1305 Fourth Ave., Seattle, Secretary.

West Virginia Medical Association, Huntington, July 13-15. Mr. Charles Lively, 1031 Quarrier St., Charleston, Executive Secretary.

Wyoming State Medical Society, Cheyenne, Aug. 16-18. Dr. Marshall C. Keith, Capitol Bldg., Cheyenne, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1932 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

Alabama State Medical Assn. Journal, Montgomery

11:337-376 (April) 1942

Simplicity in Gynecologic Practice. R. C. Benson, Birmingham.—p. 337.
Hookworm Disease Control Methods in Georgia. J. Andrews, Atlanta.—p. 342.
Food Factor in Winning the War. S. Harris, Birmingham.—p. 347.
Integration of Voluntary Agency Personnel in County Public Health Program. A. J. Perley, Lafayette.—p. 351.
Let Them Lie: First Aid Manual for Motorists. H. E. Conwell, Birmingham.—p. 354.

American Heart Journal, St. Louis

23:441-590 (April) 1942

*Effects of Physical Strain and High Altitudes on Heart and Circulation. D. B. Dill, Cambridge, Mass.—p. 441.
Normal Heart: Anatomy and Physiology of Structural Units. Jane Sands Robb and R. C. Robb, Syracuse, N. Y.—p. 455.
Syndrome of Rupture of Aortic Aneurysm into Pulmonary Artery. W. B. Porter, Richmond, Va.—p. 468.
Simple, Indifferent, Electrocardiographic Electrode of Zero Potential and Technic of Obtaining Augmented, Unipolar, Extremity Leads. E. Goldberger, New York.—p. 483.
Lumbar Sympathectomy in Treatment of Peripheral Arteriosclerotic Disease: II. Gangrene Following Operation in Improperly Selected Cases. L. N. Atlas, Cleveland.—p. 493.
Angina Pectoris: Significant Electrocardiographic Changes Following Exercise. A. Twiss and M. Sokolow, San Francisco.—p. 498.
Vasomotor Center Essential in Maintaining Renal Hypertension. W. Dock, F. Shidler, San Francisco, and B. Moy, New York.—p. 513.
Normal Duration of QT Interval. R. Ashman, New Orleans.—p. 522.
Raynaud's Disease: Review of Its Mechanism, with Evidence that It Is Primarily a Vascular Disease. O. R. Hyndman and J. Wolkin, Iowa City.—p. 535.
Effects of Ingestion of Excessive Amounts of Sodium Chloride and Water on Patients with Heart Disease. S. Proger, E. Ginsburg and H. Magendantz, Boston.—p. 555.

Physical Strain, High Altitude, Heart and Circulation.—Dill discusses cardiovascular responses to high altitudes, to deficient oxygen and to the hazard of cold and the additional hazard of aeroembolism as experienced by the aviator. The responses were studied in men, women and children living on Mount Aucanquilcha in Chile at 17,500 feet who were fully or partially acclimatized to high altitudes and of the aviator who had no opportunity for acclimatization and only a short time for adaptation. Studies of the author and his party at altitudes ranging up to 20,000 feet and of Aucanquilcha workmen revealed the mechanisms of acclimatization which enable man to survive and to live a fairly comfortable life at such an altitude. The resting heart rates of men living at Aucanquilcha were low—usually between 55 and 70. Their blood pressure was within the usual limits. The most striking change was in the alkali reserve, which was reduced by more than a third; the hemoglobin was increased by 50 per cent with corresponding increases in erythrocyte counts and hematocrit readings. The blood was so thick that it was difficult to draw through a 20 gage needle. The arterial blood was found to be about 75 per cent saturated. The men were somewhat dusky, as in polycythemia vera. None of the party attained as complete acclimatization as the residents. Their hemoglobin increased only 25 per cent and, although one to three weeks was spent at 17,500 feet, comfort was never complete. Work capacity was greatly reduced. Neither could much of an oxygen debt be accumulated. The symptoms of aeroembolism that may be experienced by air crews are bends, itching, second degree formication, irritation of the throat and headache. The most serious aspect of aeroembolism is the possibility of circulatory collapse if the cumulative effects become intolerable. At present there is no wholly satisfactory remedy. Much can be done by selecting resistant persons and by preliminary breathing of oxygen to increase one's tolerance, but this is not practical in many situations.

American J. Digestive Diseases, Fort Wayne, Ind.

9:115-146 (April) 1942

*Portal Cirrhosis with Ascites: Analysis of 200 Cases, with Special Reference to Prognosis and Treatment. R. G. Fleming and A. M. Snell, Rochester, Minn.—p. 115.
Double Gallbladder: Two Cases. M. Golob and J. L. Kantor, New York.—p. 120.
Self-Regulatory Duodenal Mechanism for Gastric Acid Control and Explanation for Pathologic Gastric Physiology in Uncomplicated Duodenal Ulcer. H. Shay, J. Gershon-Cohen and S. S. Fels, Philadelphia, with the technical assistance of H. Siplet.—p. 124.
Serum Coagulation Reaction: Its Clinical Significance. M. Kraemer, Newark, N. J.—p. 129.
*Use of Concentrated and Purified Antitoxic Bacillus Coli Serum in Treatment of Indeterminate Ulcerative Colitis. A. Winkelstein and G. Shwartzman, New York.—p. 133.
Relationship Between Gastric Motility, Muscular Twitching During Sleep and Dreaming. H. B. McGlade, Columbus, Ohio.—p. 137.
Proctoscopic Cinematography. J. F. Pessel, J. M. Garner and J. F. Nesselrod, Trenton, N. J.—p. 140.
Significance of Dosage and Time Factors on Value of Bromsulphalein Test for Liver Function. J. D. Helm and T. E. Machella, Philadelphia.—p. 141.
Treatment of Anorectal Infections with Suppositories Containing Sulfanilamide and Local Anesthetic: Preliminary Report. H. Laufman and M. Diamond, Chicago.—p. 144.

Portal Cirrhosis with Ascites.—Fleming and Snell compared the results of treating decompensated portal cirrhosis by the high carbohydrate diet with various diuretic agents with those following treatment with concentrates of all the vitamins and a high carbohydrate and protein diet with sparing use of the diuretic agents. From January 1930 to January 1940 150 patients were treated at the clinic by the first and 50 by the second method. Of the 150 patients 143 received adequate treatment. Good results, characterized by a gain in strength, diminished ascites and prolongation of the expectancy of life were obtained by 44, 40 obtained fair results and 59 exhibited no favorable response but continued to become worse and died within a short time after treatment was begun. By the time the study of the 150 patients was completed 128 (68.6 per cent died within a year) were dead and only 22 were living. Twelve of the 22 surviving patients were in excellent health, did not require medication or paracentesis and were living a normal life, 2 still required ammonium nitrate and mercurial diuretic agents to control the ascites, 7, although in fairly good condition, required abdominal tapping at intervals of two to four weeks, and definite information concerning 1 living patient could not be obtained. Of the 50 treated by the other method 30 were dead within four and one-tenth months and 20 were living. Of the 20 patients who survived, 11 were enjoying extremely good health, ascites had disappeared and it seemed that these patients would recover, 5 reported that they were much better and that the ascites was gradually diminishing and 4 had not improved. In these paracentesis was needed frequently, and the amount of fluid present was not altered.

Antitoxic Escherichia Coli Serum for Ulcerative Colitis.—Winkelstein and Shwartzman differentiate ulcerative colitis due to amebic infection, that due to chronic bacillary dysentery in which chronic manifestations of the disease are maintained by the original Shigella B. dysenteriae alone or in association with some secondary bacterial invaders and the indeterminate group with an unknown etiology in which Escherichia coli may play an important pathogenic role as a secondary invader. Their report deals with the serum therapy of the latter group. Altogether 70, 29 recently, cases were treated with the unconcentrated and concentrated antitoxic serum prepared according to the principles of the Shwartzman phenomenon. The serum gave good results in 75 per cent of the cases. Of the 29 recent cases 20 were greatly benefited, in 2 the results were questionable and 7 failed to show improvement. In view of the encouraging results, the intramuscular use of concentrated antitoxic Esch. coli horse serum (Shwartzman) is advocated for severe and intractable indeterminate ulcerative colitis.

American Journal of Diseases of Children, Chicago

63:643-838 (April) 1942

Pancreatic Enzymes in Duodenal Juice in Celiac Syndrome. Dorothy H. Andersen, New York.—p. 643.
Studies on Colloidal Sulfur-Polysulfide Mixture: IV. Therapeutic Test in Rheumatic Fever. H. Greengard, H. W. Elghammer and A. C. Ivy, Chicago.—p. 659.
Diabetic Dwarfism. R. Wagner, Priscilla White and Isabel K. Bogan, Boston.—p. 667.
Amylase Accelerating Action of Gastric Contents. W. C. Davison, Durham, N. C.—p. 728.
Quantitative and Qualitative Platelet Values of Normal Newborn Infants. H. N. Sanford and Irene Shmigelsky, Chicago.—p. 729.
Osteodystrophia Fibrosa Combined with Precocious Puberty and Exophthalmic Goiter: Pathologic Report of Case. W. H. Sternberg and Vera Joseph, New York.—p. 748.

American Journal of Medical Sciences, Philadelphia

203:469-624 (April) 1942

Reduction of Industrial Absenteeism by Preseasonal Immunization Against Catarrhal Illness. M. R. Brady, London, England.—p. 469.
Infarction in Heart Disease. C. F. Garvin, Cleveland.—p. 473.
Hemoglobin and Plasma Proteins: Their Production, Utilization and Interrelation. G. H. Whipple, Rochester, N. Y.—p. 477.
*Diabetes Mellitus and Tuberculosis. M. F. Mark, H. O. Mosenthal and Flora Liu, New York.—p. 490.
Histopathologic Prognosis of Salivary Gland Mixed Tumors. J. McFarland, Philadelphia.—p. 502.
Antemortem Diagnosis of Tumors of Heart. J. C. Doane and R. Pressman, Philadelphia.—p. 520.
*Conditioned Reflex Therapy of Alcoholic Addiction: V. Follow-Up Report of 1,042 Cases. W. L. Voegtlin, F. Lemere, W. R. Broz and P. O'Hollaren, Seattle.—p. 525.
Clinical Studies with Aid of Radiophosphorus: II. Retention of Radiophosphorus by Tissues of Patients Dead of Leukemia. L. A. Erf, Berkeley, Calif.—p. 529.
Objective Method of Determining Blood Velocity (Fluorescein Method). D. B. Fishback, S. A. Guttman and E. B. Abramson, Philadelphia.—p. 535.
Psychoneurotics Five Years Later. Constance Friess and Marjory J. Nelson, New York.—p. 539.
*Treatment of Certain Muscular Atrophies with Vitamin E, with Note on Diagnosis and Electromyograms. H. R. Viets, E. H. Trowbridge Jr. and T. E. Gundersen, Boston.—p. 558.
Dermatitis from Topical Application of 2-Methyl-1: 4-Naphthoquinone (Synthetic Vitamin K Analogue). R. C. Page, Valhalla, N. Y., and Z. Bercovitz, New York.—p. 566.
Studies of B Vitamins in Human Subject: V. Normal Requirement for Thiamine; Some Factors Influencing Its Utilization and Excretion. K. O. Elsom, J. G. Reinhold, J. T. L. Nicholson and Charlotte Chornock, Philadelphia.—p. 569.
Comparison of Bacteriostatic Effect of Sulfonamide Drugs on Growth of Twenty-Five Strains of Streptococcus Viridans. Mary A. Poston and E. S. Orgain, Durham, N. C.—p. 577.
*Evaluation of Iontophoresis Using Different Vasodilating Drugs for Treatment of Rheumatoid Arthritis. C. J. Smyth and R. H. Freyberg, Ann Arbor, Mich.—p. 580.

Diabetes Mellitus and Tuberculosis.—Mark and his associates review data on 349 patients with associated tuberculosis and diabetes who were treated at Sea View Hospital from January 1934 to December 1939. The lesions of only 40, or 11.4 per cent of the 349 patients, were minimal at the time of admission, and of these the lesions of 17 were apparently arrested or arrested at the end of the hospital stay, while the lesions of only 37 of the 107 patients with moderately advanced tuberculosis were either apparently arrested or arrested. In the far advanced group the lesions of only 19 of the 202 patients could be classified as apparently arrested. The respective hospital mortality for the three groups was 7.3, 22.4 and 43.6. The most important factor for the successful control of tuberculosis in the diabetic patient is the effective management of the diabetes. Poorly controlled diabetes predisposes to and causes rapid progression of tuberculosis, whereas the effectively controlled diabetic patient is no more subject to tuberculosis than is a normal person. The clinical course of tuberculosis was much better when protamine zinc insulin was used than when regular or crystalline insulin was employed. Pneumothorax was not as successful as in nondiabetic persons, although complications of pneumothorax were no greater in diabetic than in nondiabetic tuberculous patients. Empyema was more frequent in the diabetic than in the nondiabetic.

Conditioned Reflex Therapy of Alcoholic Addiction.—Of 1,042 alcohol addicts treated by the conditioned reflex method during a period of five and a half years, Voegtlin and his co-workers state that 58.6 per cent are abstinent and 41.4 per cent have relapsed. Of 142 patients observed for four or more years following the completion of treatment 44.7 per cent have remained abstinent and 55.3 per cent have relapsed.

Treatment of Muscular Atrophies with Vitamin E.—Vitamin E in the form of alpha tocopherol acetate was given orally or subcutaneously to 11 patients with amyotrophic lateral sclerosis, 6 with progressive muscular atrophy and 4 with peroneal muscular atrophy of the Charcot-Marie-Tooth type. In general, Viets and his collaborators declare that their results, like those of many others, showed no objectively beneficial results; a few patients were subjectively better.

Treatment of Rheumatoid Arthritis.—Smyth and Freyberg treated 28 patients who had rheumatoid arthritis with different vasodilating drugs administered by carefully controlled iontophoresis; 79 per cent were partially relieved of their articular symptoms during and for a short time after the treatment. However, few patients had significant objective evidence of improvement attributable to iontophoresis. The results from vasodilating drugs administered by iontophoresis when compared with those following other local measures of physical therapy held no advantage. Iontophoresis is a reliable way of producing localized temporary increase in circulation, but it appears to have no important advantage over the less expensive and more accessible commonly employed methods of physical therapy.

American J. Obstetrics and Gynecology, St. Louis

43:547-732 (April) 1942

*Treatment of Tetany in Pregnancy, with Brief Review of Literature. G. W. Anderson, Buffalo, and L. Musselman, Boston.—p. 547.
*Renal Function Studies in Normal Pregnancy and in Toxemia Based on Clearances of Inulin, Phenol Red and Diodrast. H. C. Taylor Jr., I. Wellen and Catherine A. Welsh, New York.—p. 567.
Granulosa Cell Tumor of Ovary and Coincident Carcinoma of Uterus. Grete Stohr, New York.—p. 586.
Roentgenography of Obstetric Pelvis: Combined Isometric and Stereoscopic Technic. K. B. Steele and C. T. Javert, New York.—p. 600.
X-Ray Localization of Placenta. B. H. Buxton, R. R. Hunt and C. Potter, Providence, R. I.—p. 610.
*Observations on Hemolytic Streptococcus Infections Following Delivery and Abortion Since the Advent of Sulfanilamide. W. E. Studdiford, New York.—p. 619.
Comparative Study of Tubal Insufflation and Lipiodol Injection in Sterility. D. Feiner, Brooklyn.—p. 639.
Intracervical Survival of Spermatozoa. W. W. Williams, Springfield, Mass., and F. A. Simmons, Boston.—p. 652.
Effect of Progesterone on Uterine Contractions. W. Bickers, Richmond, Va.—p. 663.
Extragenital Effects of Diethylstilbestrol. N. R. Kretzschmar and A. C. Barnes, Ann Arbor, Mich.—p. 668.
Causes and Treatment of Secondary Dyspareunia. E. Henriksen and Paula Horn, Los Angeles.—p. 671.
Infectious Lesions About External Genitals, with Special Emphasis on Diagnosis. M. D. Speiser, New York.—p. 681.
End Results of the Simpson Operation in Sixty-One Patients Delivered at Term, with Remarks on Treatment of Retroflexioversion in the Childbearing Woman. B. M. Anspach and J. B. Montgomery, Philadelphia.—p. 690.
Stricture Forming Lesions of Female Genitals and Rectum: Year's Study of Cases in the District of Columbia. C. K. Fraser, H. F. Kane and J. Parks, Washington, D. C.—p. 698.
Study of 569 Cases of Endometriosis. G. B. Haydon, Cincinnati.—p. 704.
Parathyroid Extract in Preeclamptic Toxemia. J. C. Brougher, Vancouver, Wash.—p. 710.
Primary Breech Birth: Experiences in 20,000 Deliveries. E. G. Waters, Jersey City, N. J.—p. 715.
Chondrodystrophic Dwarfism in Pregnancy: Report of Two Cases. H. C. Spalding, Richmond, Va.—p. 720.

Treatment of Tetany in Pregnancy.—Three cases of hypoparathyroidism associated with pregnancy are reported and some of the altered clinical features encountered are discussed by Anderson and Musselman. In the previous literature 240 cases have been presented. The early literature stresses the relationship of the female sex organs and pregnancy to the development of tetany. Other specific factors are menstruation, lactation, blood loss at delivery, hyperventilation and low calcium intake. In previous years therapeutic abortion, because of the high fetal mortality and the tendency of tetany to develop in newborn infants, was considered. During the last decade the prognosis for the pregnant mother and her baby have been much better. A carefully regulated combination of oral and intravenous calcium, solution of parathyroid and dihydrotachysterol have yielded successful results in 12 of 13 cases (including the authors' 3). Preeclamptic toxemia was present

in the unsuccessful case and premature induction of labor was necessary. In their 3 cases preeclampsia occurred twice. Therefore they feel that concurrent toxemia must be watched for. Labor or delivery was not abnormal. With the therapy available today, therapeutic abortion is rarely indicated.

Renal Function in Pregnancy and Toxemia.—Taylor and his co-workers present the results of study of antepartum and postpartum renal function as determined by renal clearance using diodrast and inulin in 20 normally pregnant and 13 preeclamptic women. The renal function of the 20 normal women was not altered by pregnancy or by parturition. Placental hormones in the concentrations found in normal pregnancy are evidently not capable of affecting filtration rate (inulin clearance), effective renal blood flow (diodrast clearance) or the amount of functioning tubular tissue (diodrast Tm). Six of the 13 patients with toxemia continued to have hypertension after delivery. The antepartum clearance for certain of these patients was within the normal range, but when the average antepartum figure is compared with accepted values for normal women or when the antepartum figures of individual patients are compared with their own postpartum values the trend is characteristic of toxemia. These consist in a slightly reduced filtration rate, an effective slightly raised or normal renal blood flow and a normal or slightly reduced filtration fraction. After delivery the filtration rate rose and the renal blood flow fell nearly one third, resulting in a high filtration fraction. These postpartum observations are characteristic of those of essential hypertension. The other 7 patients whose pregnancies were complicated by toxemia did not have hypertension after delivery. The antepartum observations were identical with those of the preceding group. The high effective renal blood flow associated with the increased arterial blood pressure of the acute phase of toxemia is evidence against the view that renal ischemia is the primary cause of hypertension.

Hemolytic Streptococcus Infections.—Since the winter of 1938 Studdiford has encountered and treated with sulfanilamide 13 patients suffering from a severe but uncommon localized or spreading hemolytic streptococcus infection following abortion or delivery. All the cases occurred between early November and late May, the season when such infection is common elsewhere in the human body. Eleven of the infections occurred after abortion and two after delivery. The circumstantial evidence bears out strongly the present belief that such organisms are conveyed to the parturient genital tract from some extragenital septic focus. At first, relatively small doses of sulfanilamide were administered, but beginning in 1939 the drug was given in gradually increasing quantities. During 1940 and for 1 patient in 1941 12 Gm. a day has been given, the dose being gradually diminished after forty-eight to seventy-two hours. Serious toxic effects did not occur. The occasional idiosyncrasy shown to the drug, particularly by patients with septicemia, whose mortality if untreated is 88⅓ per cent, can be disregarded. Many patients have had unpleasant side reactions, cyanosis, mental confusion and nausea, which were limited to the period of treatment. One patient had a pronounced leukopenia. Most patients had an anemia, which may have been due to the infection or to the drug. Both factors probably played a part. The anemia was successfully combated by transfusion repeated as often as indicated. The uterus could be safely evacuated after forty-eight hours of adequate chemotherapy. It appears that chemotherapy might be stopped when cultures from the cervix are negative. Evidence of a bacteriologic cure is a much more efficient gage for the length of treatment than the disappearance of fever. There were 2 deaths, a mortality of 15.4 per cent. However, if only the 8 patients with septicemia and/or general peritonitis are considered, the mortality was 25 per cent. This group is comparable to the 12 patients seen prior to June 1936, when chemotherapy was not available, 10 of whom died, a mortality of 83⅓ per cent. It must be borne in mind that chemotherapy may so alter the course of the disease as to produce a recurring localized peritoneal exudate which requires surgical drainage. This was the experience of 1 of the author's patients.

American Journal of Pathology, Ann Arbor, Mich.

18:169-362 (March) 1942

Muscular Dystrophy in Mice on Vitamin E Deficient Diet. A. M. Pappenheimer, New York.—p. 169.
Glomus Tumor: Investigation of Its Distribution and Behavior, and Identity of Its "Epithelioid" Cell. Margaret R. Murray and A. P. Stout, New York.—p. 183.
Nonosteogenic Fibroma of Bone. H. L. Jaffe and L. Lichtenstein, New York.—p. 205.
Brenner Tumor of Ovary: Case Reports, Discussion and Bibliography. R. A. Fox, New York.—p. 223.
Studies on Ameboid Motion of Motor Nerve Plates: II. Pathologic Effects of Carbon Dioxide and Electricity on Explosive Ameboid Motion in Motor Nerve Plates in Intercostal Muscle. E. J. Carey, Milwaukee.—p. 237.
Influence of Colchicine During Methylcholanthrene Epidermal Carcinogenesis in Mice. F. X. Paletta and E. V. Cowdry, St. Louis.—p. 291.
Silicosis of Systemic Distribution. K. M. Lynch, Charleston, S. C. —p. 313.
Experimental Allergic Focal Necrosis of Liver. G. Hartley Jr. and C. C. Lushbaugh, Chicago.—p. 323.
Proteolytic Digestion of Red and White Blood Corpuscles in Spleen. S. P. Hicks and E. L. Opie, New York.—p. 333.
Subaortic Stenosis. D. G. Mason, San Francisco, and W. C. Hunter, Portland, Ore.—p. 343.
Microfilarial Granulomas of Spleen. R. G. Dhayagude and B. M. Amin, Parel, Bombay, India.—p. 351.

American Review of Tuberculosis, New York

45:357-462 (April) 1942

*Collapse Therapy in Pulmonary Tuberculosis: Comparative Value of Different Procedures. L. W. Thompson and R. M. Janes, Toronto, Canada.—p. 357.
Pneumothorax versus Apical Thoracoplasty. S. J. Shipman, San Francisco.—p. 364.
*Bronchoscopic Suction: Aid in Closure of Cavities in Pneumothorax Cases. H. Meyersburg, H. Gruber and C. W. Lupo, Brooklyn.—p. 368.
Paradoxic Abdominal Motion in Hemidiaphragmatic Paralysis: Test for Unilateral Phrenic Paralysis. W. J. Habeeb, Mount Vernon, Ohio. —p. 373.
*Vitamin K in Tuberculosis, with Special Reference to Pulmonary Hemorrhage. S. Levy, Mount Wilson, Md.—p. 377.
Vocational Therapy: Program at Muncipal Sanatorium. E. B. Porter, New York.—p. 392.
Vocational Therapy in Sanatorium: Medical and Administrative Phases. I. D. Bobrowitz, Otisville, N. Y.—p. 400.
Anorectal Surgery in Tuberculosis. J. Goorwitch, Olive View, Calif.—p. 410.
Tuberculosis of Ear and Mastoid in Adults. S. S. Cohen and G. W. Koepcke, Minneapolis.—p. 427.
*Putrid Lung Abscess Treated with Continuous Transthoracic Aspiration (Monaldi Method). R. Rosenbloom and A. Guggenheim, Denver.—p. 437.
Retention of Tubercle Bacilli by Kidney of Rabbit: Study II. D. Yegian and J. M. Kurung, Ray Brook, N. Y.—p. 442.
Dermatopulmonary Reaction: IV. Effect of Tuberculin Reaction on Lung. S. Puder, Pestszenterzsebet, Hungary.—p. 446.

Collapse Therapy in Pulmonary Tuberculosis.—Statistics presented by Thompson and Janes show that different types of collapse therapy and proper selection of patients are important in reducing the period of treatment and enhancing the number of permanent cures. Collapse therapy, especially for patients with cavities, offers a much better prognosis than bed rest alone. Artificial pneumothorax is the treatment of choice, but if inefficient it is more of a liability than an asset. If an efficient pneumothorax cannot be established, another form of collapse, thoracoplasty, should be instituted. Extrapleural pneumothorax is indicated for acute or chronic thin walled cavities surrounded by comparatively healthy lung and for adolescents with minimal lesions that progress or are stationary under bed rest alone. Extrapleural pneumothorax is often the treatment of choice when thoracoplasty is difficult or dangerous to perform. It is of little or no value in acute caseous pneumonic phthisis. Thoracoplasty is best for cavities larger than 3 cm. in diameter and surrounded by caseous disease.

Bronchoscopic Suction.—Meyersburg and his co-workers report the influence of bronchoscopic suction on the closure of cavities of 3 patients who had had pneumothorax for six to ten months. Thoracoscopy with severance of adhesions and/or phrenic crush was previously attempted without success. Within four to eight weeks following bronchoscopic suction the unsatisfactory collapse of the 3 patients was converted to a therapeutically and anatomically satisfactory one. Clinical improvement,

as shown by diminished cough, reduction in the amount of sputum, slowing of the sedimentation rate and increase in weight, was also observed. The authors found that the best time to perform suction is when the lung is not more than 50 per cent collapsed. Secretion was obtained from each patient. The procedure was also attempted on 2 patients with poorly collapsed lung in which the lobe with the cavity was adherent to the thoracic wall; the bronchoscopic aspiration here had no effect. The 3 patients are still receiving pneumothorax refills, all have a negative sputum and gastric lavage has likewise been negative. Definite conclusions cannot be made. The report should stimulate others to investigate the value of bronchoscopic suction as a therapeutic procedure in selected cases in which pneumothorax has not been entirely effective.

Vitamin K in Tuberculosis.—Levy determined the bleeding time, the coagulation time, the prothrombin time and the hepatic function in 60 cases of pulmonary tuberculosis and in 15 control subjects in order to determine whether vitamin K had any effect on pulmonary hemorrhage. The bleeding time was not unusually high; highest values occurred in cases in which recent pulmonary hemorrhages had occurred. The average bleeding time of patients was at least 50 per cent higher than that of control subjects. The range between the highest and lowest coagulation time (four to eight minutes) of the patients was greater than that of the control group, with values between four and five minutes. The results of the prothrombin "bedside" test of Smith and the Quick test corresponded almost 100 per cent. The "clotting power" or prothrombin time of 3 patients was below 70 per cent, of 16 between 70 and 85 per cent, of 22 between 85 and 99 per cent and of 19 100 per cent or more. About one third of the patients with pulmonary tuberculosis had a more or less definite hypoprothrombinemia. The clotting power of 11 control subjects was between 85 and 99 per cent and of 4 was 100 per cent or more. Low clotting power was most pronounced in patients with a long history of tuberculosis. The hippuric acid hepatic function test clearly demonstrated that patients with long histories of tuberculosis have a definite degree of hepatic damage. This may be secondary to toxic myocarditis or amyloidosis, both of which are not uncommon in chronic tuberculosis. More than four fifths of patients had a more or less definite degree of parenchymal damage. Although only 31.6 per cent of patients showed a definite hypoprothrombinemia, vitamin K was administered and the bleeding time, the clotting power and the coagulation time have improved as the result. The hemorrhage of the 14 patients given vitamin K during bleeding ceased immediately after one injection. None of the patients exhibited massive hemoptysis. Morphine and soluble pentobarbital had no influence on the bleeding time, while calcium and Koagamin (a sterile solution having oxalic acid as its active agent) improved the bleeding time by 7 and 18 per cent, respectively. The coagulation time was prolonged by soluble pentobarbital, slightly improved by morphine and still more improved by calcium and Koagamin. Sodium pentobarbital reduced the clotting power, and morphine, calcium and Koagamin improved it but the improvement did not equal that of vitamin K.

Putrid Pulmonary Abscess.—Rosenbloom and Guggenheim report the results of treating a patient with putrid pulmonary abscess, complicated by a bronchopleural fistula, putrid empyema and bronchiectasis by continuous transthoracic aspiration of the abscess cavity. The method was resorted to because any more extensive surgical procedure represented too great a risk. The technic employed was that used in continuous aspiration (Monaldi method) of tuberculous cavities. The result was surprisingly satisfactory. The patient's condition improved rapidly. The empyema cavity became smaller and the bronchopleural fistula was no longer demonstrable. A small tube is maintained in the pleural cavity but discharge has ceased. The pus and sputum have been consistently negative. The identity of the aerobic and anaerobic organisms cultured from the sputum and pleural pus could not be established. Their nonpathogenicity was proved by animal inoculation. At present the patient is in excellent health; he has gained 40 pounds (18 Kg.) in weight.

Annals of Surgery, Philadelphia

115:481-720 (April) 1942. **Partial Index**

Oxycephaly. J. E. J. King, New York.—p. 488.
Treatment of Compound Fractures of Skull. C. C. Coleman, Richmond, Va.—p. 507.
*Recent Advances in Diagnosis and Treatment of Ruptured Intervertebral Disks. W. E. Dandy, Baltimore.—p. 514.
*Gastric Ulcer, Carcinomatous Ulcer or Ulcerating Carcinoma? W. Walters, Rochester, Minn.—p. 521.
*Gastric Resection for Duodenal Ulcer: Follow-Up Studies. A. W. Allen and C. E. Welch, Boston.—p. 530.
Extension of Borderline of Operability in Cancer of Rectum. V. C. David and R. K. Gilchrist, Chicago.—p. 566.
*Effect of Removal of Malignant Thymic Tumor in Case of Myasthenia Gravis. D. H. Poer, Atlanta, Ga.—p. 586.
Sprained Ankles. R. G. Carothers, Cincinnati.—p. 654.
Massive Repairs of Burns with Thick Split Skin Grafts: Emergency "Dressings" with Homografts. J. B. Brown and F. McDowell, St. Louis.—p. 658.
Uniform Production of Experimental Shock by Crush Injury: Possible Relationship to Clinical Crush Syndrome. G. W. Duncan and A. Blalock, Baltimore.—p. 684.
Further Observations on Stab Wounds of Heart. C. S. Beck, Cleveland. —p. 698.

Ruptured Intervertebral Disks.—Dandy points out that there can be few more excellent results than those that accrue from intelligent surgical intervention for ruptured intervertebral disks. It accounts for an overwhelming percentage of the heretofore incurable and untreatable low back pains and sciaticas, miscalled sacroiliac strains, arthritis of the spine and the like. At first the lesion was localized by injecting iodized oil into the spinal canal. However, the most important advance was attained through a statistical study of the lesions. It was found by Love and by Spurling that 96 per cent of all spinal ruptured disks were situated at the fourth and fifth lumbar vertebrae. This entirely eliminated the need of spinal contrast mediums for localization, but it did not alter the need for a means of diagnosing the lesion. Semmes, emphasizing the characteristic clinical picture, suggested that no spinal injections were necessary. He reported 16 consecutive operations performed on without contrast mediums or other tests in which ruptured disks were found. Three important advances have improved and greatly simplified the operative treatment. Originally a bilateral laminectomy was performed and the disk was removed intradurally. Mixter and Barr removed the disks extradurally by the bilateral approach. Semmes and also Love in 1939 reported their removal by hemilaminectomy and by removing only a notch of bone in a lamina, and Love in 1940 removed a high percentage of ruptured disks through the interlaminal space without removing any bone. Love's procedure is the acme of perfection but can be accomplished only when the variable space between the laminas is of sufficient size. A variation of this lesion, a "concealed disk," was disclosed by the author. Symptomatically there is no difference in the manifestations, but at operation the detection of the lesion is more difficult. The end results of treatment are the same. A concealed disk is one that protrudes so slightly that it can hardly be found at operation unless the subdural region is explored with great care. Furthermore, the most important reason for avoiding spinal contrast mediums is that a "concealed disk" does not show a filling defect and concealed disks make up more than 25 per cent of the total cases. Since the use of contrast mediums has been eliminated the author has made the diagnosis sixty-three times by clinical examination alone without a single mistaken diagnosis.

Benign or Malignant Gastric Ulcer.—The treatment of gastric ulcer should depend on the pathologic nature of the lesion; it should be remembered that roentgenography does not distinguish 10 to 20 per cent of carcinomatous ulcers from benign gastric ulcers and that there is no definite symptom complex pathognomonic of benign gastric ulcer. Experience has shown that medical treatment during which the ulcer seems to disappear, symptoms subside and blood disappears from the stools cannot be relied on to exclude the possibility of the lesion being malignant or that the benign ulceration will not recur when the patient returns to his usual habits of life. In the last few years operation has been performed in approximately 60 to 64 per cent of the cases of gastric ulcer and the mortality has been no greater, sometimes even less than for duodenal ulcer. During the same period the incidence of cases in which operation has been performed for duodenal ulcer has varied

from 15 to 18 per cent. The results of subtotal gastrectomy for benign gastric ulcer are almost perfect and superior to similar operations for duodenal ulcer. To date, Walters has not seen a case of recurrent benign gastric ulcer when half or more of the stomach was removed with the ulcer. Although subtotal gastric resection is the operation of choice for almost all cases of gastric ulcer, excision of the ulcer and/or gastroenterostomy has a place. Ulceration has recurred rarely in some cases in which excision and gastroenterostomy have been performed but more frequently when excision of the ulcer only was performed.

Gastrectomy for Duodenal Ulcer.—Surgical intervention is required by about 20 per cent of patients with duodenal ulcer. Subtotal gastrectomy, according to Allen and Welch, is the procedure indicated. Acute perforation accounts for about one fourth, cicatricial obstruction for one third and intractability and massive hemorrhage for the remaining operations. In this last group the palliative operations (gastroenterostomy, pyloroplasty, gastroduodenostomy, local excision and transection or gastric resection for exclusion) without removing the antral mucosa are attended with a high percentage of persistent symptoms and anastomotic jejunal ulcer. Two thirds of 67 patients had jejunal ulcer within two years after a palliative procedure for duodenal ulcer. Seventy-one of 76 patients having subtotal resection survived, and jejunal ulcer has not developed thus far. Not less than half the stomach together with the pylorus should be removed when feasible. The poorest results were obtained in cases with resection for exclusion without removing the antral mucosa.

Thymic Tumor.—The removal of a malignant thymic tumor in a case of myasthenia gravis is recorded by Poer, who believes that this is the only case of the type that has been diagnosed during life. The definite improvement that has resulted adds to the growing evidence that the thymus is partly if not entirely responsible for the disease. The author's experience and that of Blalock and his collaborators would indicate that every patient suffering with myasthenia gravis should be offered the possible benefits of thymectomy regardless of the presence of a definite tumor. This is further borne out by the fact that in a total of 129 necropsies and operations performed on patients with myasthenia gravis a thymic persistent or enlarged lesion was present in 30 and a definite tumor in 41. Such a consistent observation indicates some intimate connection between the thymic lesion and the disease.

Archives of Pathology, Chicago

33:411-572 (April) 1942

Production of Mammary Carcinoma in Mice by Estrogens. C. D. Haagensen and H. T. Randall, New York.—p. 411.
Histogenesis of Ovarian Mesonephroma. W. Schiller, Chicago.—p. 443.
Presence of Histamine in Inflammatory Lesions. L. Zon, E. T. Ceder and Catherine Crigler, Baltimore.—p. 452.
Serum Phosphatase Activity in Disease of Liver: Correlation of Serum Enzyme Activity and Hepatic Histologic Changes. J. G. Sharnoff, J. R. Lisa and P. A. Riedel, New York.—p. 460.
Lesions of Purkinje Network of Bovine Heart as Result of Potassium Deficiency. J. F. Sykes and L. A. Moore, East Lansing, Mich.—p. 467.
Single Stage Method to Produce Brain Abscess in Cats. L. Thomas, New York.—p. 472.
Anachoretic Effect in Pulpitis: II. Histologic Studies. L. R. Boling and H. B. G. Robinson, St. Louis.—p. 477.
Hemangioma of Spleen. B. Pines and J. Rabinovitch, Brooklyn.—p. 487.
Histologic Studies of Tissues of Rats Fed a Diet Extremely Low in Sodium. R. H. Follis Jr., Elsa Orent-Keiles and E. V. McCollum, Baltimore.—p. 504.
*Uremia Following Blood Transfusion: Nature and Significance of Renal Changes. G. D. Ayer, Fort Devens, Mass., and A. G. Gauld, Jacksonville, Fla.—p. 513.
Changes in Oxygen Saturation of Arterial Blood Incident to Death from Sudden Cardiac Failure or Asphyxia: Experimental Investigation. A. F. Goggio, Boston.—p. 543.
Alveolar Cell Tumor of Human Lung. K. T. Neubuerger and E. F. Geever, Denver.—p. 551.

Uremia Following Blood Transfusion.—Ayer and Gauld present 7 cases of uremia following transfusion which demonstrate the similarity of the renal changes in persons dying of post-transfusion renal insufficiency to the changes observed in deeply jaundiced infants without renal insufficiency. The only progressive renal changes were necrosis of the distal convoluted tubules and collecting ducts and infiltration and edema of the interstitial tissue about these tubule segments. The epithelial necrosis is the determining factor in the final morphologic picture. The presence of this necrosis determines the location of the cellular infiltration of the interstitial tissue. The earliest evidence of this process is the appearance of the brick red material in epithelial cells, which is regarded as a morphologic manifestation of cell injury. The cause of the localized epithelial necrosis remains undetermined. The progressive changes and the intratubular varicolored casts are duplicated in the kidneys of jaundiced infants who during life had no oliguria or renal insufficiency. Therefore it is unlikely that the morphologic renal changes following a delayed reaction to transfusion are responsible for the renal failure.

Archives of Surgery, Chicago

44:599-778 (April) 1942

Tumors of Palate (Benign and Malignant). H. Martin, New York.—p. 599.
*Malignant Lesions of Stomach. W. Walters, Rochester, Minn.—p. 636.
Superficial Spreading Type of Carcinoma of Stomach. A. P. Stout, New York.—p. 651.
Pathogenesis of Cholecystitis. N. A. Womack and E. M. Bricker, St. Louis.—p. 658.
*Gangrene and Perforation of Wall of Gallbladder: Sequela of Acute Cholecystitis. F. Glenn and S. W. Moore, New York.—p. 677.
Dupuytren's Contracture: Consideration of Anatomy of Fibrous Structures of Hand in Relation to This Conditon, with Interpretation of Histology. T. Horwitz, Philadelphia.—p. 687.
Reflex Changes in Respiration Induced by Distention of Small Intestine. R. T. Crowley, Detroit.—p. 707.
Carcinoma of Female Breast: Analysis of End Results After Five Years in 192 Cases, with Special Consideration of Preoperative Irradiation. L. C. Cohn, Baltimore.—p. 715.
*Sarcoma of Breast. R. P. Hill and A. P. Stout, New York.—p. 723.
Echinococcosis of Breast: Report of Case. J. A. Taiana, Boston, and C. J. Starace, Buenos Aires, Argentina.—p. 760.
Motility and Response of Great Omentum: I. Fluoroscopic Observations on Omental Activity of Dogs. R. E. Rothenberg and P. Rosenblatt, Brooklyn.—p. 764.
Preganglionic Components of First Thoracic Nerve: Their Role in Sympathetic Innervation of Upper Extremity. A. Kuntz and J. B. Dillon, St. Louis.—p. 772.

Malignant Lesions of Stomach.—At the Mayo Clinic gastric cancer, Walters points out, is encountered three and a half times more often in males than in females. Their youngest patient was 18 years old and the oldest 88. The surgical treatment of gastric cancer presents a hopeful aspect, as 28.9 per cent (31.9 per cent when the figure is adjusted for the normal death rate) of such patients, irrespective of the grade of the cancer or involvement of the regional lymph nodes, have lived five or more years after operation. Computed on the basis of the malignant grade of the cancer, the five year survival rate ranged from 86.2 per cent for grade 1 to 23.3 per cent for grade 4. The five year survival rate and the rate of resectability among patients less than 40 years of age were high in comparison to the general average. In all age groups the rate of resectability was higher and the operative risk less in females than in males. The incidence of ulcer-like dyspepsia and the temporary effective relief of pain to a nonsurgical regimen was high among patients with gastric cancer. This indicates the danger of a differential diagnosis between benign and malignant lesions on the basis of symptoms alone. Although the roentgenologist was able to demonstrate the presence of a lesion in the stomach in 98 to 99 per cent of patients, in only 75.3 per cent was he able to designate the lesion as cancer. In 10 per cent of the patients he returned a report of gastric ulcer. About 20 per cent of the patients operated on for gastric cancer had a free hydrochloric acid content of more than 30 degrees. Precancerous lesions, chronic gastric ulcer and benign polyps should be resected. The preferable procedure for cancer of the stomach is partial gastrectomy by indirect Polya or Polya-Balfour anastomosis. Billroth I anastomosis was associated with a lower mortality rate than the Polya operation.

Gangrene and Perforation of Gallbladder.—The high incidence of gangrene of the wall of the gallbladder which results in perforation in patients with acute cholecystitis has led Glenn and Moore to review their material in search of the mechanism involved. Defects in the supportive structure of the

intestinal tract in the presence of increased pressure, they believe, plays a part in the mechanism of perforation. The early manifestations of diverticula of the wall of the gallbladder were recognized by Rokitansky. Aschoff also considered these diverticula in the same light. These Rokitansky-Aschoff sinuses were demonstrated in 101 of 300 gallbladders removed at operation, and the gallbladders of 97 per cent of them contained stones. The association of the Rokitansky-Aschoff sinus with long-standing infection and calculi in the gallbladder and the rarity with which perforation of the wall of a gangrenous gallbladder occurs without previous infection and calculi indicates that such a mechanism may frequently be involved. Such a mechanism could account for the occasional multiple perforations of the gallbladder. Gangrene of the gallbladder is not unusual and occurs far more frequently than it is generally supposed. In eight years 84 patients with a diagnosis of gangrene of the wall of the gallbladder were encountered at the New York Hospital. During this period 350 patients were subjected to surgical treatment for acute cholecystitis. Of the 84 patients 44 were women and 40 were men, and in 59 there were symptoms of gangrene without evidence of perforation, in 22 patients there was perforation with localized peritonitis or localized abscess and there were 3 patients with free perforation into the peritoneal cavity. Two of the 3 latter patients died, whereas only 3 of the remaining 81 died. The results emphasize the advisability of the surgical treatment of a patient with acute cholecystitis. It is advisable to remove the gallbladder, provided the patient's general condition and local complications do not contraindicate the procedure. Of the 84 patients 77 were subjected to cholecystectomy, 6 to cholecystostomy and 1 was not operated on. As the differential diagnosis between biliary colic, acute cholecystitis and other acute conditions in the right upper quadrant of the abdomen is most difficult, it is probably less important than an attitude which leads to surgical intervention.

Sarcoma of Breast.—Hill and Stout state that in the past mammary sarcoma has been divided rather arbitrarily into adenosarcoma and pure sarcoma. The latter group can be separated into specific types: adenofibrosarcoma (cystosarcoma phyllodes), fibrosarcoma, lymphoblastoma, malignant hemangioendothelioma, liposarcoma, myosarcoma and mixed tumor. Between 1911 and 1940 inclusive 15 cases of adenosarcoma, 5 of fibrosarcoma, 2 of lymphosarcoma, 2 of leukemic tumor, 2 of carcinosarcoma (?) and 2 of malignant hemangioendothelioma of the mammary gland have been recorded in the Surgical Pathology Laboratory of Columbia University College of Physicians and Surgeons. During the same period there were 1,990 cases of carcinoma. Thus sarcoma represents 1.2 per cent of all malignant mammary tumors exclusive of the leukemias. If adenosarcoma is eliminated from the malignant class, true sarcoma forms only 0.4 per cent of malignant mammary growths. All the mammary tumors appeared in females. Adenofibrosarcoma is usually clinically benign, but true fibrosarcoma arising from the ordinary connective tissue of the breast has the same malignant potentialities as similar tumors in other regions.

Cancer Research, Baltimore

2:237-308 (April) 1942. **Partial Index**

Spectrographic Analysis of Carcinogenic Hydrocarbons and Metabolites: I. Introduction. R. N. Jones, Cambridge, Mass.—p. 237.
Visible Light and Skin Tumors Induced with Benzpyrene in Mice. J. J. Morton, Ethel M. Luce-Clausen and E. B. Mahoney, Rochester, N. Y.—p. 256.
Kinetics of Papilloma Formation in Benzpyrene Treated Mice. D. R. Charles and Ethel M. Luce-Clausen, Rochester, N. Y.—p. 261.
Effect of Maternal Influence on Spontaneous Leukemia of Mice. J. Furth, R. K. Cole and M. C. Boon, New York.—p. 280.
Biocatalysts in Cancer Tissue: I. Cytochrome c. K. P. DuBois and V. R. Potter, Madison, Wis.—p. 290.
Observations on Colloidal Vanadate Reaction (Bendien Reaction) in Series of Cases of Carcinoma of Cervix. A. A. Gemmell, Liverpool, England.—p. 296.

Delaware State Medical Journal, Wilmington

14:37-52 (March) 1942

Treatment of Compound Fractures. A. A. Walkling, Philadelphia.—p. 37.

Georgia Medical Association Journal, Atlanta

31:79-142 (March) 1942

Artificial Pneumothorax Refills in Pulmonary Tuberculosis. C. M. Sharp, Alto.—p. 79.
Artificial Pneumothorax in Treatment of Dry Pleurisy. L. Smith, Atlanta.—p. 82.
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Treatment of Pneumonia in Infants and Children. C. M. Burpee and W. A. Wilkes, Augusta.—p. 90.
Chemotherapy in Treatment of Infectious Diarrhea in Children. M. H. Roberts, Atlanta.—p. 94.
Treatment of Various Infections in Children with Sulfathiazole. R. C. McGahee, Augusta.—p. 100.

Hawaii Medical Journal, Honolulu

1:135-226 (Jan.) 1942

Observations on Treatment of War Wounds Made at Tripler General Hospital, Fort Shafter, Honolulu. J. E. Strode, Honolulu.—p. 158.
U. S. Naval Hospital, Pearl Harbor, Territory of Hawaii: Report of Activities, Dec. 7, 1941.—p. 162.
Surgical Treatment of Craniocerebral War Wounds. R. B. Cloward, Honolulu.—p. 165.
*Gas Gangrene and Tetanus: Their Prevention and Management in War Wounds. F. J. Halford, Honolulu.—p. 169.
Eye Injuries in Warfare. W. J. Holmes, Honolulu.—p. 171.
Eclampsia Precipitated by Violent Emotional Shock: Report of Case, with Radical Treatment. G. C. Milnor, Honolulu.—p. 174.
Health Department Services in War Emergency. M. F. Haralson, Honolulu.—p. 175.
Obstetrics During Major Disaster. O. L. Schattenburg, Honolulu.—p. 176.
Mental Hygiene in Wartime Hawaii. E. E. McNiel and W. M. Shanahan, Honolulu.—p. 178.
What to Do About Poison Gas. H. L. Arnold, Honolulu.—p. 179.

Gas Gangrene and Tetanus.—Halford states that there were only 11 proved cases of gas bacillus infection at Tripler General Hospital among the casualties of December 7, although the number and type of casualties treated would have led one to expect not less than four or five times this many. Thorough débridement of wounds and dressing without primary suture largely accounted for the low incidence; perhaps the generous local and oral use of sulfanilamide also played a part. The 11 instances occurred in cases in which primary suture of the wound was performed. Almost every casualty treated at Tripler Hospital had previously had prophylactic injections of tetanus toxoid and was given a "booster" injection on or soon after the initial attack on December 7. This may account for the fact that no case of tetanus was observed. Tetanus antitoxin was given the few patients who were not definitely known to have had the toxoid.

Indiana State Medical Assn. Journal, Indianapolis

35:187-240 (April) 1942

Procurement and Assignment Service for Marion County. J. R. Newcomb, Indianapolis.—p. 187.
Cancer of Larynx—Treatment by Irradiation and Report of Cases. E. L. Bulson, Fort Wayne.—p. 192.
Early Symptoms and Signs of Cancer of Rectum. J. Habermel, New Albany.—p. 196.
Diverticulitis of Colon. J. K. Berman and T. B. Bauer, Indianapolis.—p. 197.
Emergency Drugs in General Practice. F. F. Yonkman, Detroit.—p. 210.

Iowa State Medical Society Journal, Des Moines

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Some Aspects of Relation of Kidneys to Cardiovascular Disease. M. C. Winternitz, New Haven, Conn.—p. 157.
Newer Drugs in Ophthalmology and Otolaryngology. J. H. Tait, Des Moines.—p. 162.
Cancer from Gynecologic Viewpoint. J. H. Randall, Iowa City.—p. 166.
Cancer of Prostate Gland. P. F. Olson, Dubuque.—p. 169.
Carcinoma of Breast. J. W. Dulin, Iowa City.—p. 172.
Aid to the Blind Program. H. J. McCoy, Des Moines.—p. 174.

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Rhinoplasty from Cosmetic Point of View. S. Salinger, Chicago.—p. 199.
Management of Lymphedema. W. C. Beck, Chicago.—p. 202.
Gastric and Duodenal Hemorrhage. J. T. Strawn, Des Moines.—p. 205.
Drug Therapy in Neuropsychiatric Cases: Contraindications and Complications. H. Weatherly, Iowa City.—p. 208.
Unfavorable Reactions to Administration of Antisyphilitic Drugs. J. P. Sharon, Lincoln, Neb.—p. 214.
Mythology as Shown in Medical Words. Jeannette Dean-Throckmorton, Des Moines.—p. 217.
The Patient—His Own Surgeon and Nurse: Case Report. F. W. Mulsow, Cedar Rapids.—p. 219.

Journal of Experimental Medicine, New York

75:355-464 (April) 1942

Observations on Conditions of Dietary Hepatic Injury (Necrosis, Cirrhosis) in Rats. P. György and H. Goldblatt, Cleveland.—p. 355.
Studies on Antibacterial Action of Sulfonamide Drugs: I. Relation of *p*-Aminobenzoic Acid to Mechanism of Bacteriostasis. W. B. Wood Jr., Baltimore.—p. 369.
Id.: II. Possible Relation of Drug Activity to Substances Other Than *p*-Aminobenzoic Acid. W. B. Wood Jr. and R. Austrian, Baltimore.—p. 383.
Studies on Purification of Poliomyelitis Virus: I. Yields and Activity of Preparations Obtained by Differential Centrifugation. H. S. Loring and C. E. Schwerdt, San Francisco.—p. 395.
Mechanism of Specific Precipitation. W. C. Boyd, Boston.—p. 407.
Role of Components of Complement in Specific Immune Fixation. L. Pillemer, S. Seifter and E. E. Ecker, Cleveland.—p. 421.
Studies on Meningococcic Infection: XII. Immunochemical Studies on Meningococcus Type II. A. E. O. Menzel and G. Rake, New Brunswick, N. J.—p. 437.
Studies on Hypoalbuminemia Produced by Protein Deficient Diets: I. Hypoalbuminemia as Quantitative Measure of Tissue Protein Depletion. L. A. Sachar, A. Horvitz and R. Elman, St. Louis.—p. 453.
Id.: II. Rapid Correction of Hypoalbuminemia with Ad Libitum Meat Diet. R. Elman, F. A. Brown Jr. and Harriet Wolf, St. Louis.—p. 461.

Journal of Immunology, Baltimore

43:213-296 (March) 1942

Bacteriogenic Hemagglutination: II. I. Davidsohn and B. Toharsky, Chicago.—p. 213.
Opsonins of Normal and Immune Serums: I. Methods; Comparison of Effects of Normal and Immune Opsonins on Staphylococcus Aureus. E. E. Ecker, A. S. Weisberger and L. Pillemer, Cleveland.—p. 227.
Id.: II. Opsonins of Serums of Different Species, Role of Complement in Opsonic Activity and Combination of Immune Serum and Normal Serum as Influencing Opsonization. E. E. Ecker, L. Pillemer and A. O. Kuehn, Cleveland.—p. 245.
Studies on Chemical Nature and Standardization of Pollen Antigen. G. E. Rockwell, Cincinnati.—p. 259.
Relation of Cholesterol to Antigen in Tissue Extracts Prepared According to Standardized Procedure. J. F. Kent, Albany, N. Y.—p. 267.
Studies on Antibody-Antigen Mixtures: I. Effect on Normal Living Excised Tissue. Anna M. Kulka, New York.—p. 273.
*Toxoids in Active Immunization Against Gas Gangrene. J. A. Kolmer, with the technical assistance of Anna M. Rule, Philadelphia.—p. 289.

Toxoids in Active Immunization Against Gas Gangrene.—Kolmer studied the immunizing capacity in guinea pigs of perfringens toxoid, Clostridium septicum and Clostridium oedematiens. The degree of acquired immunity was much less than that produced by immunization with tetanus toxoid against the toxin of Clostridium tetani. Immunization with the toxoid of Clostridium oedematiens was negative. Improved methods for producing and concentrating more potent toxins of the clostridia of gas gangrene for conversion into toxoids by formaldehyde may eventually make simultaneous coimmunization of human beings against tetanus and gangrene possible.

Journal-Lancet, Minneapolis

62:111-154 (April) 1942

The Industrial Front. K. Emerson, New York.—p. 111.
Man of the Future in Tuberculosis Control. A. A. Pleyte and H. Holand, Milwaukee.—p. 112.
*Control of Tuberculosis Among Medical Students, with Additional Reference to Interns and Student Nurses. E. R. Weinerman and F. O. Coe, Washington, D. C.—p. 115.
Tuberculosis Occurring in High Schools. Kathleen B. Jordan, Granite Falls, Minn.—p. 121.
Eleventh Annual Report of the Tuberculosis Committee, American Student Health Association for Academic Year 1940 to 1941. C. E. Lyght, Northfield, Minn.—p. 125.
*Advantages of Tuberculin Testing Surveys Over X-Raying of Entire Groups Without First Tuberculin Testing. L. L. Collins, Ottawa, Ill.—p. 134.
Tuberculosis of Trachea and Bronchi. J. A. Perez, Cordoba, Argentina.—p. 138.
Some Problems of College Health Service in a Nation at War. Ruth E. Boynton, Minneapolis.—p. 146.

Control of Tuberculosis Among Medical Students.—Weinerman and Coe point out that the average tuberculosis rate of 7 per cent in all medical schools reported by the Association of Medical Students Committee on Student Health is significantly above that for the same age group of the general population. The figures of many schools at which control efforts have been made are more reassuring. Hahn reports only a 0.2 per cent incidence at Cornell, Flood cites a 0.4 per cent case rate at Columbia and equally low incidences obtain at Stanford, Wisconsin, Yale and other schools with well established health programs. Almost every nurse and student of medicine is exposed to the tubercle bacillus, as shown by tuberculin reaction statistics. Contact with tuberculous patients, lowered resistance because of poor living habits and laboratory bacilli—in the order named—are the main causative factors in student tuberculosis. An adequate control program must consist in a student health service with easily obtainable medical aid for all students, admission health certificates and physical examinations, compulsory tuberculin tests for all new students with semiannual retests, careful management of all new reactors, roentgen semiannual study of all positive reactors, prompt and complete treatment of all students with significant lesions, adequate housing, eating and recreational facilities for all students, special care in necropsy and laboratory rooms, proper precautions for sputum disposal, rigid isolation technic on tuberculosis floors, the education of the patient, nurse and medical student as to the proper control precautions and the elimination of tuberculous patients from general wards by the routine roentgen study of all hospital admissions.

Advantages of Tuberculin Testing Surveys.—The small expense of diagnosing tuberculosis in a community or large group of persons by using the miniature film has influenced many workers to discard the tuberculin test as a screen, but Collins believes this to be a mistake, as roentgen study alone does not afford sufficient evidence for a correct diagnosis. Education is the most powerful weapon for combating tuberculosis. The tuberculin test is the best means of taking this education into the home. Total roentgen surveys sacrifice this education. A person who discovers through the tuberculin test that he is infected is much more likely to discover earlier any clinical tuberculosis that may develop subsequently than he would if the reaction were not known. The nonreactors understand that they may some day be reactors and should therefore have the test repeated each year. Often a member of a household with a history of tuberculosis discovers that he has not yet been infected, and thus unwarranted worry is dispelled. The test eliminates the serious danger of diagnosing tuberculosis in uninfected persons only by roentgen inspection; thus some persons are spared a grave injustice.

Journal of Nutrition, Philadelphia

23:321-424 (April) 1942

*Congenital Malformations Induced in Rats by Maternal Nutritional Deficiency. J. Warkany and Rose C. Nelson, Cincinnati.—p. 321.
Effect of Level of Fat in Diet on Utilization of Vitamin A. Kathleen Dietrich Muelder and Eunice Kelly, East Lansing, Mich.—p. 335.
Respiratory Quotient of Protein of Dalmatian Dog. T. M. Carpenter and H. C. Trimble, Boston.—p. 345.
Vitamin A Requirements in Rat: Relation of Vitamin A Intake to Growth and to Concentration of Vitamin A in Blood Plasma, Liver and Retina. J. M. Lewis, O. Bodansky, K. G. Falk and G. McGuire, New York.—p. 351.
Effects of Substitution of Bicarbonate for Chloride in Diet of Rats on Growth, Energy and Protein Metabolism. L. Voris and E. J. Thacker, State College, Pa.—p. 365.
Interrelation of Calcium and Fat Utilization in Growing Albino Rat. C. E. French, State College, Pa.—p. 375.
Influence of Dietary Fat on Lactation Performance in Rats. L. A. Maynard and Edith Rasmussen, Ithaca, N. Y.—p. 385.
Ascorbic Acid Excretion at Known Levels of Intake as Related to Capillary Resistance, Dietary Estimates and Human Requirements. Tatiana Levcowich and E. L. Batchelder, Kingston, R. I.—p. 399.
Studies of Liberal Citrus Intakes. I. Caroline Sherman Lanford, New York.—p. 409.
Distribution of Nicotinic Acid in Foods. L. J. Teply, F. M. Strong and C. A. Elvehjem, Madison, Wis.—p. 417.

Congenital Malformations in Rats.—Skeletal abnormalities, Warkany and Nelson point out, occurred in about one third of the offspring of female rats reared and bred on a rachitogenic diet supplemented with viosterol. Similar skeletal defects were not found in the offspring of females of the same strain reared and bred on a stock diet or when the females were reared and bred on a diet which contained 2 per cent of dried pig liver and 1 per cent of calcium carbonate or only 2 per cent of pig liver. By alternately breeding the same female on different diets, abnormal and normal litters were obtained. Apparently a nutritional factor that is present in liver in large amounts is necessary for the normal intrauterine development of the rat.

Journal of Pediatrics, St. Louis

20:405-536 (April) 1942

*Primary Virus Pneumonitis: Comparative Study of Two Epidemics. J. M. Adams, R. G. Green, C. A. Evans and N. Beach, Minneapolis.—p. 405.
Use of Sulfonamides in Treatment of Syphilitic Keratitis. J. M. Arena, Durham, N. C.—p. 421.
Studies of Physical Characteristics of Children in Marseilles, France, in 1941. H. C. Stuart, Boston, and D. Kuhlmann, Marseilles, France.—p. 424.
Further Studies on Urinary Excretion of Thiamine in Children. R. A. Benson, L. B. Slobody, C. M. Witzberger and L. Lewis, New York.—p. 454.
*Intracutaneous Immunization Against Scarlet Fever. L. Jacobs, New York, and H. Orris, Hillside, N. J.—p. 466.
Resistance to Infection as Affected by Variations in Proportions of Protein, Fat and Carbohydrate in Diet: Experimental Study. W. S. Sako, New Orleans.—p. 475.
Calsoy: Soybean Substitute for Milk. B. F. Feingold, Los Angeles.—p. 484.
Sarcoidosis: Case Report. I. Posner, Detroit.—p. 486.
Epidermoid Carcinoma in First Decade of Life: Report of Case. Rita M. Carey, Pittsburgh.—p. 496.
Influenzal Meningitis: Report of Case with Recovery. E. P. Scott and J. W. Bruce, Louisville, Ky.—p. 499.
Orthodontic Problems. H. J. Noyes, Chicago.—p. 503.

Primary Virus Pneumonitis.—Adams and his associates compared the acute primary virus pneumonitis that occurred in 74 infants in two epidemics and found a constant symptom pattern characterized by cough, dyspnea, cyanosis and low grade fever. The mortality was 20 per cent. The pathologic features—cytoplasmic inclusion bodies in the epithelial cells, sloughing and proliferation of bronchial epithelium, accumulation of mononuclear exudate and patchy atelectasis—found in the lungs in fatal cases were uniform. These features were not seen in 20 control cases of pneumonia in infants caused by the usual bacteria. Eighty-five per cent of the throat smears from infants with pneumonitis were positive for inclusion bodies, whereas less than 10 per cent of infants and adults in five control groups showed inclusion bodies. Fairly extensive biologic studies on the virus of pneumonitis have failed to isolate the agent. The prematurely born infant is the most susceptible host. The susceptibility of all postneonatal infants contraindicates further institutional care of well babies whenever the disease is prevalent. No specific therapy has as yet been developed, but oxygen, postural drainage, aspiration of exudate, blood transfusion and the sulfonamide drugs (to combat secondary bacterial infection) have appeared to be efficacious in some cases. Whole adult blood may have prophylactic value, especially for the premature infant.

Scarlet Fever Immunization.—Jacobs and Orris used scarlet fever streptococcus toxin in vials in graduated doses (500, 2,000, 8,000, 25,000 and 80,000 to 100,000 skin test doses) to immunize infants and children with positive Dick tests attending their clinic. The toxin, 0.1 cc., was given intracutaneously into the skin over the thigh. Alternate thighs were used for the injections, which were of a stronger dilution. The intervals between injections were two, three and four weeks. The patients were immunized to the point of a negative skin test and were then periodically tested for as long as four years. Of 250 infants and children immunized, 187 were followed for a sufficient time to obtain accurate records of the course of their immunity. After the last injection 144 of the 187 children returned within three months for their first Dick retest and the remaining 43 within three to eighteen months. There were 100 (69.4 per cent) negative reactors at the end of three months. Of 33 retested after three to six months 26 (78.8 per cent) reacted negatively. The 24 who on the first retest had positive Dick reactions were given an additional injection of 9,000 skin test doses, and 6 of the 7 retested three months later reacted negatively. All the 37 children Dick tested two to four years after the last injection reacted negatively, as did 13 of the 14 who were given an additional injection of 9,000 skin test doses. Eight hundred and seventy-five injections were administered, and of these 730, or 83.4 per cent, were not followed by a reaction. Five of the 53 children who had reactions had nine severe reactions, 12 had fourteen moderate reactions and 36 had one hundred and twenty-two mild reactions. In this last group the vague complaints of irritability and restlessness the night of the injection, or itching, soreness or pain at the site of injection followed each injection.

Journal of Urology, Baltimore

47:403-534 (April) 1942. **Partial Index**

Wilms' Tumor in Sixty-Four Year Old Male: Report of Case. F. C. Hamm, Brooklyn.—p. 403.
Adenocarcinoma and Fibrosarcoma in Same Kidney: Report of Two Cases. W. Weisel and M. B. Dockerty, Rochester, Minn.—p. 410.
*Unilateral Renal Ischemia Associated with Hypertension: Case Report. C. L. Wilson and C. T. Chamberlain, Fort Smith, Ark.—p. 421.
*Peripheral Ligations in Relation to Blood Pressure. F. M. Allen, New York.—p. 431.
Submucous Extension of Squamous Cell Epithelioma of Urinary Bladder. J. F. Conway and A. C. Broders, Rochester, Minn.—p. 461.
Contracted Bladder: Report of Method of Treatment. M. M. Parker, Port of Spain, Trinidad.—p. 472.
Myomatous Tumors of Epididymis. H. H. Friedman and D. M. Grayzel, Brooklyn.—p. 475.
*Study of Malignant Testicular Tumors Including Case Reports of Chorionepithelioma Accompanied by Hypertension and Teratoma Testis with Single Tridermal Metastasis. J. E. Adams, Boston.—p. 491.
Pathogenicity of Staphylococci Isolated from Urine. M. Levine and C. D. Creevy, Minneapolis.—p. 515.
Studies on Interference of Certain Substances of Biologic Importance with Action of Sulfanilamide. Justina H. Hill and Edna F. Mann, Baltimore.—p. 522.
Semen Studies in Four Hundred Sterile Marriages. O. J. Pollak and C. A. Joël.—p. 531.

Unilateral Renal Ischemia and Hypertension.—Wilson and Chamberlain report the occurrence of atrophic pyelonephritis with hypertension in a girl of 12 who complained of frequent right temporal and occipital headaches and partial blindness for one year and whose blood pressure on admission was 230 systolic and 170 diastolic in the right and 210 systolic and 160 diastolic in the left arm. For ten days following admission the patient was kept at bed rest and given phenobarbital at regular intervals. During this time the lowest blood pressure obtained was 190 systolic and 130 diastolic. Several cold pressor tests failed to influence the blood pressure. Nephrectomy was performed. The pathologic changes in the specimen were similar to those seen in experimentally induced hypertension in dogs. The microscopic renal changes, especially the arteriolar changes, were in complete accord with the experimental observations of Goldblatt. The retinal changes also closely approximated the pathologic changes in the retina of the hypertensive dog. The severity of the vascular damage was demonstrated not only by the changes in the fundus of the eyes but also by the fact that a cerebral accident occurred some months before, as indicated by the history and by residual weakness of the facial muscles. Sclerotic changes involved large arteries and arterioles, as evidenced by thickening of the radial arteries. It seems safe to assume that arterial changes were widespread throughout the body. The involvement of the large arteries lends support to the theory that hypertension itself will produce secondary vascular changes if present for a long time and that renal ischemia is associated with sustained hypertension. During the last twelve months it has been obvious in this case that although the improvement in the retinal vessels has been striking, definite residuums will be permanent. The remaining arteriolar changes represent irreversible pathologic changes. In all probability similar irreversible changes are present in the remaining kidney. The authors feel that this explains the range of the patient's present blood pressure: 120 systolic and 80 diastolic. The case emphasizes the fact that this particular patient would have had more benefit from earlier surgery.

Peripheral Ligations in Relation to Blood Pressure.—According to the experiments performed by Allen on the dog, it appears that this animal is apparently subject to a higher degree of psychic or nervous hypertension than man. The results of ligations of various parts of the body, duplicating those previously obtained with the kidney, confirm the interpretation that the phenomenon is not humoral or specific to the kidneys but is purely nervous in character. A strong psychic factor is obvious in all the experiments with ligation or clamping of the kidneys, testes, legs, tail and ears, but the occurrence or persistence of an elevated pressure under mild anesthesia or psychic quietness indicates an additional nervous mechanism, probably reflex. The experiments show that the secondary rise of pressure after prolonged ligation of explanted kidneys may sometimes be matched by ligation of the testes and tail.

in which case it is evidently a nervous response to the painful local inflammation. As acute hypertension from ligation of organs or from simple excitement occurs in epinephrectomized animals, the adrenals are apparently not concerned in the process.

Malignant Testicular Tumors.—Pathologic material was available for study from 21 of the 26 patients with malignant neoplasms of the testis seen at the Peter Bent Brigham Hospital from 1913 to 1939. The series was representative of all the commonly recognized tumors arising in this location as well as teratoma testis with single tridermal metastasis and a chorionepithelioma with associated hypertension. According to Adams, data from the study lend support to the theory that these tumors, including seminomas and chorionepitheliomas, probably are of common origin. It is held that they arise from a spermatogenic cell or cells. Such cells may be pleuripotential and give rise to tridermal metastasis. A case with single tridermal metastasis, each containing derivatives of all three germ layers, is cited as evidence for such an occurrence. It is suggested that trophoblastic tissue is present in teratoma testis more often than is commonly supposed and that its presence accounts for the large amount of gonadotropic substance in the urine of a patient with such a tumor.

Kansas Medical Society Journal, Topeka

43:89-132 (March) 1942

Significance of Vomiting and Diarrhea Among Infants and Children. R. L. J. Kennedy, Rochester, Minn.—p. 89.
Benign Tumors of Mesentery. W. M. Mills, Topeka.—p. 93.
Incidence of Syphilis in Private Practice. H. E. Reitz and H. N. Tihen, Wichita.—p. 96.
Salicylate Therapy in Acute Rheumatic Pericarditis with Effusion: Report of Case. H. T. Gross, Columbus, Ohio.—p. 98.
Pedology and Its Possibilities. W. E. McKinley, Jewell.—p. 102.

Military Surgeon, Washington, D. C.

90:353-480 (April) 1942. **Partial Index**

Simple Effective Method for Treatment of Meningococcic Meningitis. P. S. Strong.—p. 373.
Next Great Plague to Go: Being Short History of Syphilis. R. A. Kilduffe.—p. 374.
War Neuroses. N. Q. Brill.—p. 390.
Method for Relief of Pyloric Obstruction. D. T. Chamberlin.—p. 407.
*Acute Appendicitis: Sequela of Typhoid Inoculation. W. F. Bowers and L. Shupe.—p. 413.
*Thirteen Cases of Meningitis Treated with Serum and Sulfonamides at Station Hospital, Fort Dix, N. J. M. Kasich and B. Shulman.—p. 419.
Early Treatment of Fractures of Mandible. A. J. Hemberger.—p. 424.
Significance of Pyorrhea in Its Relationship to Systemic Disease. D. Mosher.—p. 428.
*Treatment of Trichophyton Foot Infections in the Field. C. J. Rademacher.—p. 431.
Sulfur and Soap as Effective Prophylaxis Against "Chiggers" (Red Bugs) in Army. Z. J. Romeo.—p. 437.
Soap and Water as Venereal Disease Prophylactic. W. A. Angwin.—p. 439.

Acute Appendicitis and Typhoid Inoculation.—Immediately after each new increment of troops was inoculated against typhoid at Fort Leonard Wood, Mo., Bowers and Shupe noticed that there was an influx of patients with acute appendicitis. While most of the cases subsided spontaneously under conservative management, 8 patients have come to appendectomy. The time relationship between the inoculation and the development of acute appendicitis was so striking that they investigated the situation and concluded that acute appendicitis on the basis of luminal obstruction by swollen lymphoid tissues was not a rare sequela of typhoid inoculation. They urge that all patients who complain of abdominal pain after such an inoculation be watched and that those in whom the pain, accompanied by rebound tenderness, becomes localized to the lower right quadrant be subjected to appendectomy. It is to be understood that the value of typhoid inoculation outweighs the danger of appendicitis.

Meningitis Treated with Serum and Sulfonamides.—Kasich and Shulman state that 6 of 13 patients with meningitis admitted to the Station Hospital, Fort Dix, N. J., between Dec. 29, 1940 and July 14, 1941 were treated with serum intrathecally or intravenously and with chemotherapy. At the daily spinal puncture 40 cc. of fluid was removed and 15 to 30 cc. of antimeningococcus serum was injected by gravity into the spinal canal. This was continued until the cell count and the sugar content of the spinal fluid returned to normal. Sulfanilamide was given concurrently, 2 Gm. for the first dose and then 1 Gm. every four hours for seven days after treatment with serum was stopped. The patients who received intravenous treatment were given 90 cc. of serum twice a day diluted in 200 cc. of isotonic solution of sodium chloride. Serum reactions caused this method to be discontinued after a few injections and to continue with the sulfonamide medication alone. Of the 7 patients who received only chemotherapy, 6 received sulfanilamide, 2 Gm. for the first dose and 1 Gm. every four hours thereafter. When the temperature and the spinal fluid became normal, chemotherapy was continued, 1 Gm. every eight hours for five days. Spinal taps were done for diagnosis only. One patient was treated with sulfapyridine, 4 Gm. for the first dose and 1 Gm. every four hours thereafter. After the temperature was normal for four days a maintenance dose of 1 Gm. was administered every eight hours for seven days. All the patients recovered; 3 had complications and 2 sequelae—1 partial left ear deafness and 1 weakness and loss of power of the left shoulder caused by a peripheral neuritis. The patients who were given chemotherapy alone had fewer unfavorable reactions and complications. In 11 of the 13 the diagnosis was definitely established on admission by finding gram-negative intracellular diplococci in the spinal fluid and confirmed by culture, and in 2 the spinal fluid, under increased pressure, was turbid and contained a large number of cells, 100 per cent of which were neutrophils.

Treatment of Trichophyton Foot Infection.—Rademacher, commander of the Ninth Army Corps, suggested treatment of trichophyton infection with sodium sulfathiazole. In a battalion of 570, there were found 75 cases of trichophytosis ranging from a mere scaling with slight fissures to macerated swollen feet with large fissures and crusting. Half of the group were treated with pure sodium sulfathiazole crystals dusted on the lesions daily and half with 50 per cent sulfathiazole in talc. The condition of practically all the patients was definitely improved within forty-eight hours. Thereafter half of the patients were treated with 50 per cent and the other half with 25 per cent sulfathiazole in talc. The results in the two series were equally good. Smaller percentages (5 to 10 per cent) of sulfathiazole would probably be equally effective. There is available a commercial product of 5 per cent sulfathiazole in a bland ointment that is satisfactory. Treatment must be controlled, for if left to the patient it is not thorough and regular. All infected areas must be covered with a film of the powder. Criteria of cure were healing of all lesions and disappearance of all adherent cutaneous débris. Of the 75 patients 22 were cured within ten days, 9 were lost to follow-up from causes beyond control and 44 after being treated for a short time and obtaining much improvement responded no further. These patients were further treated with 10 per cent of powdered sulfathiazole in a 2 per cent salicylic acid ointment. The length of treatment varied from two weeks to a month. Five were lost to follow-up, 33 were cured and 6 are still resistant. If the 14 patients lost to follow-up are not considered, 55, or 90 per cent of the 61 remaining patients, were cured.

Minnesota Medicine, St. Paul

25:241-320 (April) 1942

Medical Causes of Rejection in Selective Service Registrants. C. A. McKinlay, Minneapolis.—p. 255.
Injuries of Nose. C. W. Waldron, Minneapolis.—p. 258.
*Transfusion Reactions and Erythroblastosis Fetalis Caused by Rh Factor. G. N. Aagaard, Minneapolis.—p. 267.
*Simple Method for Removal of Iodized Oil from Spinal Subarachnoid Space. E. H. Juers, Red Wing, and H. O. Peterson, St. Paul.—p. 270.
Removal of Iodized Oil (Lipiodol) from Spinal Canal After Roentgen Diagnosis. G. R. Kamman and J. P. Medelman, St. Paul.—p. 273.
Boiled Liver Extract in Treatment of Acne Vulgaris. C. A. Boreen, Minneapolis.—p. 276.

Transfusion Reaction and Erythroblastosis Fetalis.—Aagaard reports 2 transfusion reactions which were probably due to the Rh factors in the transfused blood. To prevent such reactions, special studies (the agglutination test of Wiener

and Peters and the biologic test for blood compatibility) are indicated when any medical, surgical or partal or postpartal patient with blood dyscrasias, chronic blood loss or a history of obstetric complication requires repeated transfusions. A list of Rh negative donors should be available in every obstetric service.

Removal of Iodized Oil from Spinal Subarachnoid Space.—The Kubic and Hampton method of aspirating iodized oil from the spinal subarachnoid space was used successfully by Juers and Peterson in 13 of 17 cases. The method consists in aspirating the oil through the same spinal puncture needle through which it was injected. Although the procedure is basically simple, attention to the following points are essential for a successful aspiration: 1. The site for the puncture is best determined fluoroscopically. 2. The needle must enter the dural sac as close to the midline as possible. This position should be checked fluoroscopically before the oil is injected. 3. Multiple punctures must be avoided. 4. Suction with a small syringe (2 to 5 cc.) must be extremely gentle if sucking a nerve root or a piece of membrane into the needle is to be avoided.

Missouri State Medical Assn. Journal, St. Louis

39:95-130 (April) 1942

Cesarean Section. S. D. Soule, St. Louis.—p. 95.
Tetanus Following Criminal Abortion with Recovery. R. R. Wilson, J. B. Keeler and P. F. Stookey, Kansas City.—p. 96.
Eclampsia: Some Thoughts on Therapy. C. R. Wegner, St. Louis.—p. 98.
Use of Intravenous Dial Urethane in Obstetrics: Analysis of 2,000 Cases. D. T. Van Del, Kansas City.—p. 100.
Postpartum Genitourinary Infections. J. L. Johnston, Springfield.—p. 102.
*Erythroblastosis Fetalis in Dizygotic Twins. V. B. Buhler, C. W. Seely and C. McCormick Jr., Kansas City.—p. 106.

Erythroblastosis Fetalis.—Buhler and his associates report the occurrence in dizygotic twins of the triad icterus neonatorum, hydrops fetalis and congenital anemia, heretofore considered as separate entities but now as fetal erythroblastosis. The theory of the Rh factor as the cause of the disease was confirmed by a study of the blood of the mother, the father and the twins. The father's blood was Rh positive, the mother's Rh negative and the infants' blood Rh positive with both guinea pig immune serum and human serum. The diagnosis at necropsy on both infants was fetal erythroblastosis. Of the mother's seven previous pregnancies (the first, one of the second and the fifth) only 3 children are living; 1 of these is one of twins. The other of these twins died two hours after birth. The third pregnancy resulted in a stillborn fetus with petechial hemorrhages of the pleura and epicardium, visceral congestion and extensive postmortem autolysis; erythroblastosis was suspected. Two years later a spontaneous abortion of a 3 month fetus occurred; at the sixth pregnancy two years later a 10 inch macerated fetus (following this delivery the mother was in severe shock and a transfusion of the husband's blood was attempted but after a few cubic centimeters were given chills, urticaria and purpuric lesions developed; she recovered on emergency treatment) was delivered and a year later she had an incomplete abortion, followed by dilation and curettement at eight weeks.

New England Journal of Medicine, Boston

226:469-512 (March 19) 1942

Vitamin C and Wound Healing: I. Experimental Wounds in Guinea Pigs. M. K. Bartlett, C. M. Jones and Anna E. Ryan, Boston.—p. 469.
Id.: II. Ascorbic Acid Content and Tensile Strength of Healing Wounds in Human Beings. M. K. Bartlett, C. M. Jones and Anna E. Ryan, Boston.—p. 474.
So-Called "Coagulation Defect" in Menstrual Blood. E. L. Lozner, Z. Eileen Taylor and F. H. L. Taylor, with the technical assistance of M. A. Adams and Harriet MacDonald, Boston.—p. 481.
Bile Duct Reconstruction with Vitallium Tubes: Report of Case. H. M. Clute, Boston.—p. 484.
Trichinosis and Enterobiasis: Their Importance in New England. D. L. Augustine, Boston.—p. 488.

226:513-546 (March 26) 1942

Present Day Surgery of Pancreas. A. O. Whipple, New York.—p. 515.
Fractures of Femur. G. W. Van Gorder, Boston.—p. 526.
Mumps. C. Wesselhoeft, Boston.—p. 530.

New Jersey Medical Society Journal, Trenton

39:129-182 (March) 1942

Gastroscopy and the General Practitioner: First Year Review at Mountainside Hospital. T. S. Heineken, Bloomfield.—p. 138.
Traumatic Rupture of Hydrocele: Report of Case. H. F. Cook and G. F. Hewson, Newark.—p. 142.
Circulation Time and Venous Pressure. E. C. Klein Jr., Newark.—p. 144.
Placement of Cardiovascular Cases in Industry. M. Greenberg, Linden.—p. 147.
Radiology in Obstetrics: Maternal Welfare Article Number Sixty-Eight. H. J. Perlberg, Jersey City.—p. 152.
Modern Trend Toward Better Organized Medical Services. L. A. Wilkes, Trenton.—p. 155.

New Orleans Medical and Surgical Journal

94:461-518 (April) 1942

The Place of Medicine Today. F. H. Lahey, Boston.—p. 461.
*Ten Years' Experience Treating Malaria by Short Course Method. J. P. Sanders, Shreveport, La.—p. 465.
Treatment of Malaria. O. W. Bethea, New Orleans.—p. 469.
*Renal Damage Following Use of Sulfathiazole. G. E. Burch and T. Winsor, New Orleans.—p. 474.
Arsenical Encephalitis During Pregnancy: Report of Two Fatal Cases. R. E. Arnell and W. F. Guerriero, New Orleans.—p. 482.
Indications and Contraindications for Versions and Extraction and Extractions in Breech Presentations. E. L. Zander, New Orleans.—p. 487.
Modern Concepts in Treatment of Bronchial Asthma. H. D. Ogden, New Orleans.—p. 490.
Fortifying White Bread with Vitamins and Minerals. S. Bliss, New Orleans.—p. 497.

Treating Malaria by Short Course Method.—Sanders discusses his experience with quinine and quinidine in the treatment of malaria from 1930 to 1940 inclusive. By 1935 he had treated 1,047 cases of malaria with quinidine alone. Until July 1933 the treatment consisted of four single daily doses of 10 grains (0.65 Gm.). Then it was increased to five days with two doses (10 grains) the first two days. A statistical study disclosed 74 per cent one, 78 per cent two, 68 per cent three and 86 per cent four year cures, or a combined rate of 75 per cent. Eighty-one patients were treated with quinine, 7 with hydroquinine, 48 with cinchonine and cinchonidine, 7 with hydrocinchonine and hydrocinchonidine and 56 with atabrine. Of the patients treated with atabrine 37 per cent relapsed; this is comparable to that of quinine and quinidine. The other cinchona alkaloids, although only a few patients were treated with each, confirmed previous reports of their efficacy. During 1937, with the cooperation of thirty-two physicians, a comparison of quinine and quinidine in the treatment of 1,138 cases was made. From 10 to 20 grains (0.65 to 1.3 Gm.) of quinine daily was as effective as 30 to 40 or 60 to 90 grains (2 to 2.6 or 4 to 5.8 Gm.). The five day course of quinine was as effective as the longer course; that is, fourteen days with 10 grains two nights a week for the rest of the season. The relapse rate of quinidine was 15 per cent in benign tertian and 13 per cent in estivo-autumnal malaria, while with quinine it was 20 and 30 per cent respectively. The author believes the short course of therapy is preferable to the long, as it allows a few parasites to remain in the body and immunizing substances to develop. Idiosyncrasy is about as common with quinidine as with quinine; 6 instances occurred among the 2,215 patients. This observation bears out the ratio ordinarily expected with quinine, 1:300 to 1:500. No patient has been sensitive to both quinine and quinidine. Women in all stages of pregnancy tolerate quinidine well. Quinidine probably does not cause amblyopia as quinine sometimes does. Patients in whom hematuria was caused by quinine have tolerated quinidine with no recurrence of the hemorrhage. Seven patients have been treated with sulfanilamide and sulfapyridine; 2 did not respond readily and were put on quinidine. Of the thirty or more cinchona alkaloids, most of them have antimalarial value. Treatment with atabrine should not be repeated in less than two months. There is a strange similarity between all the antimalarial drugs in that they "cure" 65 to 75 per cent of patients. The acute cerebral or comatose type of malaria is probably best treated with quinine hydrochloride (15 to 30 grains) given as an infusion, and repeated if necessary. Frequently the patient with hemorrhagic malaria or blackwater fever, another difficult type to treat, has taken some quinine and it is advisable to switch to the other drug—quinine to quinidine or vice versa.

In no instance in a change from one drug to the other has the blood not been freed from parasites. For chronic malaria the author has found it best to give short courses (three) of treatment with ten to fifteen days of rest in between. Complications of pregnancy or deafness are safer treated with quinidine.

Renal Damage Following Use of Sulfathiazole.—Burch and Winsor report 2 cases in which renal complications developed following the use of sulfathiazole. This brings the total to 31 cases, but they do not believe that this represents the total number of patients who have sustained renal damage from its use. The diagnosis of renal damage from sulfathiazole is not difficult if the patient has been properly studied before and during treatment. Hematuria, oliguria, backache, renal colic, tenderness over one or both kidneys, progressive nephromegaly, decreasing renal function and azotemia in a patient receiving sulfathiazole should make one suspect renal damage. The presence of one of the changes alone or any combination of them is sufficient for a tentative diagnosis. If renal function is determined daily, renal damage can be detected early. The prevention of injury to the kidneys by sulfathiazole is not difficult if certain rules are followed: the determination of previous treatment with any one of the sulfonamide drugs, evaluation of the patient's renal function and the nature of the urine being excreted before therapy, the determination of the patient's fluid balance before therapy and the correction of dehydration if such exists, the administration of alkalis, the maintenance of an alkaline urine and the determination of idiosyncrasy to any one of the sulfonamides. The drug should be stopped immediately, once the slightest evidence of renal injury is discovered. Fluids should be administered in large quantities. The pelves should be catheterized and the catheters should remain in place until a normal urinary flow has been reestablished. Irrigation will relieve ureteropelvic obstruction but will have no effect on tubular obstruction. The latter should be treated by an intense diuretic regimen.

New York State Journal of Medicine, New York

42:577-736 (April 1) 1942

Aurotherapy in Lupus Erythematosus: Study Based on Further Experience of Fourteen Years. P. E. Bechet, New York.—p. 609.
Injuries to Cervical Vertebrae. Barbara B. Stimson, New York.—p. 615.
Experimental Acute Gastric Ulcer Produced in Animals by Exposure to Sulfur Dioxide Gas. F. R. Weedon, Jamestown, N. Y.—p. 620.
Nonschizophrenic Catatonic States. M. Herman, Dorothy Harpham and M. Rosenblum, New York.—p. 624.

Ohio State Medical Journal, Columbus

38:305-416 (April) 1942

Mediterranean Anemia in Adult: Family History Analysis. M. L. Goldhamer, Cleveland.—p. 321.
Leukocytosis in Cerebrospinal Fluid in Cerebral Hemorrhage. W. E. Molle, Cincinnati.—p. 325.
*Infectious Syndrome Resembling Influenza. S. R. Salzman, Toledo.—p. 328.
Atypical Thromboses of Peripheral Veins. L. N. Atlas, Cleveland.—p. 331.
Treatment of Ringworm of Feet. R. L. Kile, Cincinnati.—p. 333.
Sulfaguanidine in Diarrheas of Infants and Children. I. A. Sivon, S. Wise and E. H. Baxter, Columbus.—p. 336.
Heparin Therapy in Thrombosis of Central Vein of Retina. L. A. Levison and J. L. Roberts, Toledo.—p. 338.
Phrenic Nerve Surgery in Collapse Therapy of Pulmonary Tuberculosis. E. K. Johnson, Columbus.—p. 340.
Sulfanilamide and Surgery for Acute Gonorrheal Pyosalpinx. L. A. Sweatt, Auburn, Maine, and S. Levy, Cincinnati.—p. 342.
Acquired Stenosis of Pulmonary Valve: Case Report; Death Caused by Staphylococcus Aureus Septicemia and Acute Bacterial Endocarditis. R. G. Lehman, San Diego, Calif.—p. 345.
United States Army Medical Milestones. E. B. Pedlow, Lima.—p. 347.
Dissecting Aneurysm of Aorta: Case Report Presenting Clinical Problems. H. Landt and R. H. Fuller, Cincinnati.—p. 352.

Infectious Syndrome Resembling Influenza.—Since the spring of 1940 Salzman has seen an infectious disease, both endemic and epidemic, probably due to a virus which resembles influenza but with certain definite characteristics that allow it to be differentiated from influenza. In addition to the picture of a general systemic infection, pulmonic and neurologic involvements may occur. The diagnostic characteristics are the leukocyte count, which shows a definite elevation during all stages of the disease. The count varies from 13,000 to 27,000 even in afebrile cases. Three types of the disease may be recognized: the influenzal, the pulmonary and the neurologic. The influenzal type is most frequent. The onset is usually sudden, frequently without coryza and sometimes with a slight sore throat. Nasopharyngitis is common. The temperature is rarely above 100 F. in the sporadic case, but in the epidemic case it is usually 102 to 103 F. The symptoms of generalized infection—malaise, exhaustion, backache and generalized aching—are frequent. Occasional soreness and localized edema of some group muscles, especially of the forearms and legs, is not rare. After the acute phase of the infection subsides the patient may have no pains, but he complains of persistent and intense fatigue. The pulmonary type is similar to the influenzal group except that the lungs are involved. The neurologic type may be difficult to diagnose and, in occasional instances, may lead to abdominal intervention. Patients complain of severe lancinating but temporary pains in various parts of the body. The skin over the involved area is always hyperesthetic. These patients usually give the typical history of the acute phase of the infection some weeks before seeking medical advice. The onset of the neuritic pains (which occur in about a third of patients) can be traced back to a week or ten days after the onset of infection. Despite the fact that the sulfonamide drugs have thus far not been found to be of value in virus diseases, they have been almost specific for this group of patients. Sulfadiazine and sulfathiazole, 1 Gm. repeated in one hour then 1 Gm. every four hours for twenty-four hours, then 1 Gm. every six hours for forty-eight hours, have been equally satisfactory. Thiamine hydrochloride, 10 to 15 mg. hypodermically every day, was of considerable value for relieving the neuritic and neuromuscular pains. There was no mortality or serious pulmonary complication among 30 patients seen in the last eighteen months. A few were seen during the summer and early fall when influenza was not present.

Public Health Reports, Washington, D. C.

57:445-484 (March 27) 1942

*Immunization with Inactive Virus of Influenza B: Comparison of Antibody Response with That Produced by Infection. M. D. Eaton and W. P. Martin.—p. 445.
Observations on Experimental Malaria Control Drainage Ditch Linings. J. L. Robertson Jr., J. A. Le Prince, H. A. Johnson and W. V. Parker.—p. 451.

57:485-520 (April 3) 1942

Appraisal Technic for Urban Problem Areas as Basis for Housing Policy of Local Governments. Subcommittee on Appraisal of Residential Areas.—p. 485.
Histogenesis and Repair of Hepatic Cirrhosis in Rats Produced on Low Protein Diets and Preventable with Choline. R. D. Lillie, L. L. Ashburn, W. H. Sebrell, F. S. Daft and J. V. Lowry.—p. 502.

Immunization with Inactive Virus of Influenza B.—Human volunteers from 20 to 30 years of age were given subcutaneous injections in the left arm of 1 cc. of influenza B vaccine and in the right arm of 1 cc. of the complex influenza A distemper vaccine of Horsfall and Lennette. The neutralizing antibody titers of acute and convalescent serum specimens obtained about two weeks apart from 70 influenza patients were compared by Eaton and Martin with prevaccination and postvaccination serum specimens from 63 persons receiving the influenza B vaccine. The influenza patients showed greater increases in antibodies than did the vaccinated persons. This effect was related to the differences in initial antibody titers of the vaccinated and infected persons. The antibody levels two weeks after infection or vaccination roughly indicate that, as far as circulating antibodies are concerned, the response resulting from vaccination with influenza B virus treated with formaldehyde is similar to that resulting from infection. The increase in complement fixing antibodies after vaccination was less definite than the response to infection. The prevaccination and postvaccination antibody titers against influenza A and B show that some individuals showed a decided increase to influenza A but little or none to influenza B, while the reverse was true of others. Because of the present uncertainty as to the role of circulating antibodies in immunity to viruses, claims for effectiveness of any vaccine should not be based on considerations of antibody response. The results indicate that allantoic fluid preparations of the virus of influenza B treated with formaldehyde have a relatively high antigenicity as judged by the production of neutralizing antibodies.

Rocky Mountain Medical Journal, Denver

39:245-316 (April) 1942

Treatment of Patients with Protruded Intervertebral Disks. J. Raaf, Portland, Ore.—p. 263.
Chemical Review and Clinical Evaluation of Stilbestrol. L. W. Mason, Denver.—p. 266.
Human Plasma: Review of Its Preparations and Indications in Military and Civil Practice. J. Henderson, Philadelphia.—p. 271.
Early Infiltrative Tuberculous Lesion: Its Significance, Behavior and Treatment. E. Mayer, New York.—p. 278.
Acute Intestinal Obstruction. G. B. Kent and K. C. Sawyer, Denver.—p. 283.

Virginia Medical Monthly, Richmond

69:175-234 (April) 1942

Psychology of Isolationism. F. Kennedy, New York.—p. 176.
*Infectious Mononucleosis: Unusual Manifestations. B. S. Leavell and J. O. McNeel, Charlottesville.—p. 180.
Hepatomegaly. C. M. Caravati, Richmond.—p. 187.
Lesson Learned from Nature in Control and Arrest of Pulmonary Tuberculosis. S. E. Hughes, Danville.—p. 195.
Carcinoma of Cervix: Time Lost Before Treatment. R. H. Hoge, Richmond.—p. 200.
Roentgenologic Diagnosis of Gastrointestinal Hemorrhage. A. Barker, C. H. Peterson and C. D. Smith, Roanoke.—p. 203.
Method for Eradicating Congenital Sinuses by Electrocoagulation and Steam, with Special Reference to Pilonidal Sinuses. P. Jacobson, Petersburg.—p. 206.
Sickle Cell Anemia. J. P. Baker, Richmond.—p. 208.

Infectious Mononucleosis.—Atypical and protean symptoms of infectious mononucleosis or glandular fever are not unusual and are frequently confused with some other more serious condition. Leavell and McNeel present 8 of 57 cases in which unusual manifestations were encountered. Diagnosis often cannot be established for a few days, the difficulty usually being due to the fact that infectious mononucleosis is not considered. If the disease is suspected, the characteristic blood picture and positive heterophil agglutination, which are generally present when the patient first consults the physician, are clearly diagnostic. Infectious mononucleosis should be considered in all patients with unexplained fever, Vincent's angina, atypical influenza, any glandular enlargement and unusual forms of encephalitis and lymphocytic meningitis. It should also be considered in patients with unexplained lymphocytosis, false positive Wassermann reactions, jaundice and unexplained abdominal pain.

War Medicine, Chicago

2:193-380 (March) 1942

Anesthesia in War Surgery. J. W. Pender and J. S. Lundy, Rochester, Minn.—p. 193.
*Mumps as Military Disease and Its Control. C. Wesselhoeft, Boston, and C. F. Walcott, Cambridge, Mass.—p. 213.
Care of Face and Jaw Casualties in United States Army. L. C. Fairbank, Washington, D. C.—p. 223.
Medical Implications of British National Fitness Campaign. F. A. Hellebrandt, Madison, Wis.—p. 230.
Protection of Workers in Government Defense Industries from Venereal Diseases. E. W. Brown, Washington, D. C.—p. 246.
*Relation Between Electroencephalogram and Flying Ability. M. Thorner, Randolph Field, Texas; F. A. Gibbs and Erna L. Gibbs, Boston.—p. 255.
Gastroenterology in the Army: Methods of Examination and Disposition of Cases. R. Schindler, Chicago.—p. 263.
Utility of Marrow Cavity of Sternum for Parenteral Fluid Therapy. E. M. Papper and E. A. Rovenstine, New York.—p. 277.
Treatment of Pneumococcic Pneumonia with Sulfadiazine and Sodium Sulfadiazine. H. F. Flippin, S. B. Rose, L. Schwartz and A. H. Domm, Philadelphia.—p. 284.

Mumps as Military Disease and Its Control.—Wesselhoeft and Walcott recommend four steps to be carried out when a case of mumps occurs in any military establishment: 1. The patient should be closely questioned as to when and where he might have acquired the disease, it being borne in mind that the average incubation period is eighteen days. If others in the command were simultaneously exposed they should be immediately placed under observation in separate detention. 2. The patient should be isolated. His equipment should be thoroughly aired in the sunlight or handled as facilities permit. 3. Arrangement should be made for the isolation of the unit. Contacts need not be detained separately until twelve days after the diagnosis of the original case. It is desirable to keep each contact on separate detention for ten days, that is from the twelfth to the twenty-first day after exposure. This prevents further spread. 4. Convalescent serum, 20 cc. into the gluteus muscle, should be given as soon as possible to those with negative histories and, if the supply is sufficient, to those with questionable histories. The early eradication of mumps in a unit of a large command is of utmost importance, because once an epidemic gains headway control is difficult; for example, in the last war the epidemic at Camp Wheeler comprised 5,756 cases. The medical officer in the hospital receiving patients with mumps should collect blood on the day of the patient's discharge for convalescent serum.

Electroencephalogram and Flying.—In comparing the flying ability of 55 student fliers and 54 pilots with the electroencephalographic observations, Thorner and the Gibbses find that flying ability can be correlated with (1) the distribution of energy in the right occipital spectrum, (2) the dominant frequency and character of the control electroencephalogram (ink record) and (3) the amount of slowing that occurs with overventilation. The data suggest that if correct criteria are used it may be possible to select a superior group of candidates for flying instruction, with a resultant reduction in the proportion of failures and an increase in the proportion of superior fliers.

West Virginia Medical Journal, Charleston

38:49-96 (Feb.) 1942

Rheumatic Fever. S. Gibson, Chicago.—p. 49.
*"Acute Rheumatic" Heart Disease Apparently Cured by Sulfanilamide. H. C. Davis, Bluefield.—p. 58.
Some Remarks on Preoperative and Postoperative Care of Patients. M. R. Reid, Cincinnati.—p. 64.
Rectal Examinations. R. H. Walker and T. P. Mantz, Charleston.—p. 69.
The Doctor Advises the Wife. A. P. Hudgins, Charleston.—p. 72.

38:97-130 (March) 1942

Management of Hypertensive Toxemias of Pregnancy. T. J. Williams, University, Va.—p. 97.
Problems of Biliary Tract Surgery. I. S. Ravdin, Philadelphia.—p. 102.
Shock Therapy in Mental Disease. A. L. Wanner, Wheeling.—p. 107.
Effect of Senescence on Gastric Emptying. E. J. Van Liere, Morgantown.—p. 114.
End Results of Industrial Injuries. C. L. Heaberlin, Charleston.—p. 118.

Sulfanilamide for Acute Rheumatic Heart Disease.—Davis states that the cardinal signs and symptoms in 7 cases of acute rheumatic carditis disappeared early and rapidly and remained so when sulfanilamide was administered early and repeatedly. The rheumatic manifestations did not seem to be intensified when sulfanilamide was given at the beginning of the carditis. The articular involvement in 1 case cleared completely. Sulfanilamide started early may have prevented the state of sensitization or counteracted the formation of toxins. The author agrees with Hedley that rheumatic carditis should be regarded as the chief manifestation and not as a complication of rheumatic fever, and that acute rheumatic fever is a systemic disease with articular involvement a secondary toxic reaction.

38:131-166 (April) 1942

Tuberculosis in General Practice. H. E. Kleinschmidt, New York.—p. 131.
Value of Rest and Collapse in Pulmonary Tuberculosis. D. Salkin and A. V. Cadden, Hopemont.—p. 134.
Renal Tuberculosis. G. G. Irwin, Charleston.—p. 140.
*Tuberculous Stricture of Bronchus; Recovery Following Roentgen Therapy: Report of Case. H. A. Durkin, Peoria, Ill., and P. P. Vinson, Richmond, Va.—p. 144.
Maxillary Sinusitis of Dental Fracture Origin. Sobisca S. Hall and H. V. Thomas, Clarksburg.—p. 146.
Nutrition in World Crisis. Mrs. Welch England, Parkersburg.—p. 156.

Tuberculous Stricture of Bronchus.—Durkin and Vinson report the favorable outcome of a tuberculous bronchial stricture treated by high voltage roentgen therapy. When the patient, a woman of 30, was examined almost five years later she was completely free from pulmonary symptoms and had gained 35 pounds (16 Kg.). Physical and roentgen study revealed a small amount of fibrosis in the upper lobe of the left lung without evidence of bronchial occlusion. Bronchoscopy was not recommended.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Experimental Pathology, London

23:1-60 (Feb.) 1942

Mode of Action of Sulfanilamide: II. Antisulfanilamide and Other Antibacteriostatic Factors in Bacterial Extracts. H. N. Green and F. Bielschowsky.—p. 1.

Id.: III. Relation of Chemical Structure to Bacteriostatic Action of Aromatic Sulfur, Selenium and Tellurium Compounds. H. N. Green and F. Bielschowsky.—p. 13.

Inactivation of Vaccinia Virus by Radiations. D. E. Lea and M. H. Salaman.—p. 27.

Nagler Reaction: Breakdown of Lipoprotein Complexes by Bacterial Toxins. E. M. Crook.—p. 37.

Erythrocyte Sedimentation: Experiments with Constant Volumes of Cells. R. B. Whittington and A. K. Miller.—p. 56.

British Journal of Radiology, London

15:97-128 (April) 1942

Wounds of Diaphragm. P. Kerley.—p. 97.

Faculty of Radiologists: Discussion on Constitutional Effects of Radiation, with Special Reference to Volume Dose. W. M. Levitt.—p. 99.

Absorption of Primary Beta Radiation from Radium in Lead and Platinum and Specific Gamma Ray Dose Rate at Filtration of 0.5 Mm. of Platinum. G. J. Neary.—p. 104.

Photoelectric Instrument Measuring Quality and Quantity of X-Rays for Radiographic Purposes. R. H. Herz.—p. 110.

Pelvimetry Simplified. W. H. Hastings.—p. 114.

Plummer-Vinson Syndrome with Radiologically Demonstrable Peptic Ulcer of Esophagus: Case. A. Elkeles.—p. 122.

Effect of X-Rays on Single Colonies of Pandorina. L. Halberstaedter and A. Back.—p. 124.

British Medical Journal, London

1:281-314 (Feb. 28) 1942

War Neurosis: Year in Neuropathic Hospital. J. A. Hadfield.—p. 281.

Intravenous Serum in Treatment of Peripheral Vascular Disease. G. W. Hayward.—p. 285.

Selective Bacteriostatic Action of Gentian Violet. L. P. Garrod.—p. 290.

Tuberculin and X-Ray Survey of Group of Adolescent Boys, with Special Reference to Miniature Radiography. J. C. Gilchrist, S. H. Graham and T. W. Davies.—p. 291.

Orbital Cellulitis from Gas Producing Organisms. I. S. McGregor.—p. 292.

1:315-348 (March 7) 1942

*Immunization Against Diphtheria with Alum Precipitated Toxoid. F. Fulton, B. Moore, Joan Taylor, A. Q. Wells and G. S. Wilson.—p. 315.

War Neurosis: Year in Neuropathic Hospital. J. A. Hadfield.—p. 320.

*Sulfapyridine in Ophthalmia Neonatorum. A. Sorsby, Elizabeth L. Hoffa and E. W. Smellie.—p. 323.

Sulfapyridine as Aid to Postoperative Treatment of Laryngeal Diphtheria Associated with Measles. D. F. Johnstone.—p. 325.

Case of Congenital Osteopsathyrosis, with Genealogical Tree of the Family. F. A. Henley.—p. 326.

1:349-376 (March 14) 1942

*Immunization Against Diphtheria with Alum Precipitated Toxoid. F. Fulton, B. Moore, Joan Taylor, A. Q. Wells and G. S. Wilson.—p. 349.

Mustard Gas Lesions of Eyes. Ida Mann.—p. 353.

Strangulated Hernia: Consideration of Some Factors Affecting Mortality. D. M. Douglas.—p. 354.

*Allergy, Enuresis and Stammering. I. Gordon.—p. 357.

Immunization Against Diphtheria.—Fulton and his colleagues discuss the immunity, judged by the Schick conversion rate, produced in children inoculated with 0.1 and 0.3 cc. of alum precipitated toxoid at intervals of four to six weeks. They have inoculated approximately 30,000 school children against diphtheria during the last two years. A proportion of the children were Schick tested before and after inoculation: of 2,751 boys 74.5 per cent and of 2,150 girls 83.1 per cent reacted positively. The intensity of the Schick reactions did not appear to be affected by the age of the child. Pseudoreactions were observed in only 1.2 per cent of subjects. Approximately half of the children inspected for local tissue reaction showed some degree of reaction after inoculation. Local reactions were more common among Schick negative than in Schick positive reactors. Constitutional reactions following inoculation could not be observed. To determine whether the immunity conferred by the 0.1 and 0.3 cc. doses was lasting, the children of two schools that had been Schick tested before and after inoculation were retested thirteen months after the second dose of alum precipitated toxoid; 97.7 per cent of them were Schick negative. Further tests on the children of seven schools who had never been Schick tested showed that of 966 children Schick tested twelve months after their second inoculation 91.3 per cent were Schick negative. Two thirds of the positive reactions were trivial; many would probably have been regarded negative by less exacting observers. There was no diphtheria in any of these schools after inoculation and practically none in the whole town. Provided only preparations of alum precipitated toxoid of guaranteed potency are issued, inoculations of 0.2 cc. and then 0.3 or 0.5 cc. at an interval of not less than four weeks should provide an adequate degree of immunity against diphtheria without weakening the success of the immunization campaign by the occurrence of unduly severe tissue reactions. The optional increase of the second dose to 0.5 cc. is suggested mainly to widen the margin of safety if the alum precipitated toxoid has not been stored in the refrigerator or is nearing its expiration date. For routine purposes children should be immunized with two doses at the age of 1 year, and then a single dose of 0.3 to 0.5 cc. to stimulate their waning immunity on entering school at 5 years, and again at the age of 10. Preimmunization Schick tests are rarely called for; but Schick tests two to four months after inoculation serve as a useful control to the efficiency of the method employed.

Sulfapyridine in Ophthalmia Neonatorum.—From September 1939 to January 1942, 322 cases of neonatal ophthalmia were treated by Sorsby and his co-workers. Of the total 273 were treated with sulfapyridine by mouth and 49 by local medication. Sulfapyridine was used irrespective of the causal organism, and clinically there appeared to be no obvious specially selective action on gonococci. The contrast shown by the results obtained with sulfapyridine is striking; 61.9 per cent of patients were cured clinically within eight days by sulfapyridine as against 15.2 per cent by local methods; and respectively 5.9 per cent required prolonged treatment of more than thirty days as against 26.1 per cent. Surprisingly there were as many rapid recoveries of nongonococcic as of gonococcic infections with sulfapyridine. Sulfapyridine is regarded as a specific against the gonococcus and feebly active against the staphylococcus and most of the other common organisms of ophthalmia neonatorum.

Allergy, Enuresis and Stammering.—A history of allergy in the child or his family was obtained by Gordon in 85 (65 per cent) out of 128 bed wetters as compared to 28 per cent in 200 control children. Likewise there were 70 children who stammered, and of these 46, or 66 per cent, had a personal or family history of allergy. The control figure for the 200 children was again 28 per cent. It is suggested that, among the manifestations of allergy, migraine is largely associated with enuresis and stammering and that headaches of various types may be a factor in the etiology. This being the case, and the fact that nightmares are common among allergic children, enuresis and stammering are not themselves direct allergic manifestations but result from the abnormal psychologic traits common to allergic persons.

Journal of Royal Naval Medical Service, London

28:1-74 (Jan.) 1942

War Burns: Survey of Treatment and Results in 100 Cases. A. I. L. Maitland.—p. 3.

*Chronic Meningococcic Bacteremia: Review of Literature Together with Clinical Account of Five Cases Met with in Hospital Ship. C. A. Clarke.—p. 17.

Angina Pectoris. H. L. Hoffman.—p. 28.

Treatment of Some Common Dermatoses. H. R. Vickers.—p. 36.

Psychiatry: An Advertisement. G. C. Tooth.—p. 42.

Novocain Injections for Myalgia. T. A. Best.—p. 47.

Chronic Meningococcic Bacteremia.—The clinical symptoms and physical signs of the 5 cases of chronic meningococcic bacteremia that occurred in a hospital ship between January 1940 and July 1941, Clarke points out, agreed well with the descriptions in the literature reporting cases occurring in the present war. Pain, fever, cutaneous spots and a palpable spleen were present. Signs of meningeal involvement were not

observed, but the pressure of the cerebrospinal fluid in 1 case was increased, although it was normal cytologically. The diagnosis in 2 cases with a positive blood culture was simple, the clinical picture and response to treatment in 1 case of tertian fever were so characteristic that no doubt was entertained, 1 patient was under observation for so short a time that dogmatic statements were not possible (he was admitted within three weeks from the same station as the patient with the tertian fever and all evidence points to the diagnosis being correct) and in 1 case subacute rheumatism was considered in the differential diagnosis but the length of the illness, the absence of articular swelling and cardiac signs and failure to respond to salicylates militated against a diagnosis of rheumatism. Sulfapyridine produced dramatic results in 2 cases, definite improvement occurred in 1 and in 1 the symptoms returned when the dose of the drug was reduced, but recovery ultimately occurred.

Lancet, London

1:249-280 (Feb. 28) 1942

Treatment of Intracapsular Fractures of Femoral Neck. A. S. B. Bankart.—p. 249.
*Physiologic Effects of Blast. P. L. Krohn, D. Whitteridge and S. Zuckerman.—p. 252.
*Incidence of Perforated Peptic Ulcer: Effect of Heavy Air Raids. D. N. Stewart and D. M. de R. Winser.—p. 259.
Diphtheritic Diaphragmatic Paralysis Treated in Box Respirator. J. M. Todesco.—p. 261.

Physiologic Effects of Blast.—The mode in which blast lesions occur and the effect that blast has on the cardiovascular system, on the respiratory mechanism and on cortical activity in rabbits are discussed by Krohn and his colleagues. In the experiments the trunks of the rabbits were protected while their heads were directly exposed to high blast pressures. The changes observed confirm earlier observations that thoracic and abdominal lesions which result from blast are due to the wave acting on the surface of the body and not to the pressure or the suction components of the wave acting through the nose and mouth. The thoracic and abdominal lesions are primarily due to the impact of the pressure component on the wall of the body. The lesions can occur when the suction component is excluded. Electrocardiographic records show that the heart beat in blasted animals is coordinate. The electrocardiograms of animals which survive high blast pressures may show a transitory anoxemia. Animals exposed to blast show an immediate fall in arterial blood pressure related to the peak of the pressure anoxemia. Animals exposed to blast show an immediate fall in arterial blood pressure related to the peak of the pressure experienced. There is a slight maintained fall in venous pressure. These "shock" symptoms are not due to vagal inhibition. The falls in pressure can be regarded as a "shock" effect of pulmonary or extrapulmonary trauma, but the changes in the systemic blood pressure can be explained as secondary to changes in the pulmonary blood flow. The reserve of the capillary bed is reduced, and the danger of a rise in the pulmonary arterial pressure and of pulmonary edema as a result of increased venous return is greater. The respiratory rate of rabbits which survive exposure to blast is prolonged and increased. When the lung is so severely damaged that whole lobes are consolidated, respiration is extremely labored because of changes in the elastic recoil of the lungs. Animals exposed to high blast pressures are not concussed. Immediate death unassociated with external trauma appears to be due to "shock" following internal injury; sometimes it is associated with occlusion of the larger air passages by blood clot. Delayed death is generally due to pulmonary edema but sometimes to intraperitoneal hemorrhage. Treatment should avoid overtaxing an already diminished pulmonary capillary reserve. Oxygen, morphine and venesection may be beneficial, while transfusion, general anesthesia and exertion are contraindicated.

Perforated Peptic Ulcer.—Stewart and de R. Winser obtained figures for 1937-1940 from sixteen London hospitals and discovered a statistically significant increase in perforated peptic ulcer during the first heavy air raids of September and October 1940. The probable cause for the increase was anxiety. Of the perforations for the four years, 93 per cent were in men. The ratio of gastric to duodenal perforation was 1.6:1. The peak incidence was in those aged from 50 to 60; this is in contrast to the peak between 20 and 40 in the September and October 1940 series. There was no significant change in age, sex or site among perforations in the air raid period. The monthly average for the four years was 25; excluding September and October 1940 it is 23, whereas in these two months it was 64.

Practitioner, London

148:193-256 (April) 1942

Sex Hormones in General Practice. E. C. Dodds.—p. 193.
Therapeutic Use of Thyroid in General Practice. D. M. Dunlop.—p. 198.
Adrenal Hormones in General Practice. L. Cole.—p. 204.
Therapy of Anterior Pituitary Glands. S. L. Simpson.—p. 210.
Pain in Endocrine Disorders. V. C. Medvei.—p. 214.
Management of the Septic Hand. H. Dodd.—p. 219.
Cancer Recurrences: Their Prediction, Treatment and Prevention. J. H. D. Webster.—p. 226.
Laryngeal Tuberculosis. B. T. Mann.—p. 231.
Traumatic Myalgias. M. Good.—p. 236.
Whooping Cough Preventive Inoculation. W. P. Phillips and C. W. Anderson.—p. 241.
Minor Surgery: IX. Nose and Throat. E. D. Davis.—p. 244.

Quarterly Journal of Medicine, Oxford

11:1-76 (Jan.) 1942

Results of X-Ray Therapy in Thyrotoxicosis. L. Martin.—p. 1.
*Effect of Liver Therapy on Erythropoiesis as Observed by Serial Sternal Punctures in Twelve Cases of Pernicious Anemia. L. S. P. Davidson, L. J. Davis and J. Innes.—p. 19.
Methyl Chloride Poisoning. A. M. Jones.—p. 29.
Pregnancy and Diabetes. R. D. Lawrence and W. Oakley.—p. 45.

Effect of Liver Therapy on Erythropoiesis.—The changes that Davidson and his colleagues observed in films prepared from sternal marrow obtained from patients with pernicious anemia before and at various short intervals after liver therapy was instituted are presented. Within six to ten hours of the initial injection of liver extract the mean size of the nucleated erythrocytes is reduced, the nucleus stains deeper and the chromatin strands appear irregular and lumpy. The frequency of cell type II increases at the expense of type I. The predominant cell of this type has a basophilic cytoplasm; the principal feature that distinguishes it from type I is the nuclear change. This change is not accompanied by any increase in the percentage of mitotic figures that is commensurate with the decided change in the appearance of the bone marrow picture. No definite evidence of amitotic division was observed. After thirty-two to seventy-two hours type I cells become relatively infrequent and the picture is dominated by small type III cells, usually with a polychromatic cytoplasm and a small, relatively dense nucleus; the megaloblastic picture has by now become normoblastic. Again no significant increase in mitotic figures is seen. The low incidence of mitotic figures and the definite cellular changes would seem to support the theory that the maturation is a direct physicochemical process due to the action of the liver extract rather than the result of cellular mitosis. There is no proof of the existence of such a process. It is also possible that the frequency of cells seen in mitosis is due to the rapidity of the cytologic changes, so that only a small number may be recognizable at any given moment. This contention is supported by the finding of only a small percentage of cells in division in the bone marrow five to six days after liver therapy was begun, when many reticulocytes were present in the peripheral blood, indicating a decided activity of the bone marrow. The rapidity of the change in the bone marrow from a megaloblastic to a normoblastic picture supports the view that normoblasts can be derived directly from megaloblasts. Differential counts of erythroblasts on sternal marrow films obtained from patients with severe untreated nutritional iron deficiency anemia and hemolytic anemia give figures comparable to those obtained in cases of pernicious anemia three days after the institution of liver therapy. Under conditions of prolonged and severe strain a reversion of the normoblastic toward the megaloblastic blood picture may occur. If this is correct, it supports the thesis that megaloblasts and normoblasts belong to one developmental series of cells.

Schweizerische medizinische Wochenschrift, Basel

72:1-28 (Jan. 3) 1942. **Partial Index**

Experiences in Treatment with Ovarian Hormones (Estrus Producing Hormones and Corpus Luteum Hormone). T. Koller and K. Anderes. —p. 1.
*Fundamental Problems in Clinical Evaluation of Chemotherapeutics. W. Löffler and R. Hegglin.—p. 7.
Focal Infection and Allergy. O. Meyer.—p. 10.
Etiology of Torsion Fracture of Leg During Skiing. F. Jakob.—p. 12.
*Gonococcic Arthritis: Treatment and Cure by Sulfathiazole. U. Thiry. —p. 13.

Clinical Evaluation of New Chemotherapeutics.—Löffler and Hegglin point out that the new chemotherapeutics is being further investigated, because so far no preparation has been found which is entirely free from undesirable secondary effects and because certain pathogenic micro-organisms are inadequately influenced by the available drugs. In view of the excellent results obtained so far the introduction of new ones will be justified only if they surpass or at least equal the ones now available. New compounds will be expected to produce the same therapeutic effect with less undesirable secondary effects and with greater therapeutic action. The action and the secondary effects of the available chemotherapeutic agents must be thoroughly understood if new ones are to be properly evaluated. The authors present a comparative evaluation of sulfapyridine and sulfathiazole on the basis of 511 cases of pneumonia. These two preparations have reduced the mortality rate of pneumonia to such an extent that further improvement can hardly be expected. While sulfapyridine is somewhat more effective in the reduction of fever, sulfathiazole has the advantage that its effect on the blood system is less harmful. The authors describe their observations with N-di methylacroylsulfanilamide, which is known also under the term irgamid. They used this new preparation in 10 cases of acute pneumonia and found that its clinical effect is inferior to that of sulfathiazole, whereas its undesirable secondary effects, particularly on the blood system, are greater.

Sulfathiazole in Gonococcic Arthritis.—Thiry reports the history of a dancer aged 24 who twelve days before hospitalization had become ill with sore throat and a feeling of stiffness throughout the body, particularly of the neck. A tuberculous or gonococcic coxarthritis was suspected. A strongly positive gonococcic reaction established the diagnosis. Treatment with sulfathiazole was instituted and proved successful. Inquiry revealed that the patient's occupation played a part in the localization of the lesion, because eight days before the dancer became ill forced extension of the right leg on the back had been done in the course of training. The author thinks that slight traumas may favor the localization of the gonococcus in the hip joint of a dancer. Roentgenograms taken at various stages showed the extent of regression of osseous lesions.

Archivos Argentinos de Pediatría, Buenos Aires

17:113-216 (Feb.) 1942. **Partial Index**

Progressive Hypertrophic Neuritis of Dejérine-Sottas. J. P. Garrahan, J. Diez and A. M. A. Caprile.—p. 113.
Bradyrhythmia and Syncopal Crisis by Congenital Auriculoventricular Block with Concomitant Interventricular Communication. A. Casaubón, R. Kreutzer and L. M. Cucullu.—p. 124.
Syndrome of Guillain Barré of Tuberculous Etiology. A. Gareiso, P. O. Sagreras and J. E. Mosquera.—p. 138.
*Hutchinson's Teeth. Sara de Alzaga and R. R. Sundblad.—p. 149.
Purulent Meningococcic Meningitis. A. A. Bonduel and J. M. Albores. —p. 160.
Erythroblastic Icterus: Two New Cases. C. M. Pintos, V. O. Visillac and R. A. Celle.—p. 165.
*Intestinal Obstruction in a Prematurely Born Infant Caused by Mucous Plug. J. M. Ucha.—p. 175.

Hutchinson's Teeth.—De Alzaga and Sundblad studied dental anomalies in children with congenital syphilis. They gained the impression that not all of the characteristics of Hutchinson teeth need necessarily be combined. Bilaterality may be absent, as is indicated in one of Hutchinson's own reports. The defects are not necessarily limited to the permanent teeth. While the majority of authors who have studied Hutchinson's teeth deny their occurrence in the first dentition, there are some, including the authors themselves, who have observed them in the deciduous teeth. The frequency of Hutchinson's teeth in hereditary syphilis varies according to different investigators. The authors encountered dental anomalies in 51.21 per cent of 125 children in whom heredosyphilis was certain or highly probable, though only 6 had typical Hutchinson's teeth. It is necessary to differentiate Hutchinson's teeth from the lesion that is characterized by the physiologic corrosion of the enamel on the free edge or from Fournier's dental vulnerability. While some regard Hutchinson's teeth as pathognomonic of a syphilitic infection, others deny that syphilis is the only etiologic factor, pointing out that rickets, deficient alimentation and endocrine disturbances may be important. The authors themselves encountered Hutchinson's teeth only in connection with hereditary syphilis. Two theories are most widely accepted about their pathogenesis in heredosyphilis: one assumes a direct specific action by Spirochaeta pallida while another assumes an indirect action of this organism by way of the endocrine glands. The authors report 6 cases in which they observed Hutchinson's teeth. In 3 the defect was in the permanent, in 3 in the deciduous, teeth. All presented positive syphilitic reactions, but only 2 showed other clinical manifestations of heredosyphilis.

Intestinal Obstruction in a Prematurely Born Infant.—Ucha reports the history of an infant born prematurely during the eighth month of gestation. Since the infant did not expel meconium during the hours following birth, anorectal atresia was diagnosed. Rectal introduction of a Nélaton No. 18 catheter indicated intestinal obstruction. Roentgenologic examinations were made without and with contrast medium. Tepid saline solution was administered rectally with pressure and induced the expulsion of a cylindric plug 10 cm. in length, the examination of which disclosed meconium and small fragments of intestinal mucosa. The infant died on the fifth day, and necropsy corroborated the diagnosis.

Bol. de la Soc. Chilena de Obst. y Ginec., Santiago

6:371-428 (Oct.) 1941. **Partial Index**

*Therapeutic Conduct in Convulsive Eclampsia. L. Matus.—p. 377.

Therapy of Eclampsia—Matus injects into a vein 20, 30 or 40 cc. of a 20 per cent magnesium sulfate solution or 60 cc. of the solution intramuscularly, as well as hypertonic dextrose solution in large doses. The patient is isolated and put to rest. The injection is repeated within thirty minutes if the nervous excitement persists. Otherwise, intramuscular injections of 30 or 40 cc. of magnesium sulfate solution is administered at intervals of four hours. As many as four or five injections are given. Intravenous injection of hypertonic dextrose solution is administered at the beginning of the treatment and is repeated in twelve hours. If the convulsions are not controlled by the first two or three injections, 20 cc. of a 50 per cent sodium bromide solution and 40 cc. of hypertonic dextrose solution is injected. The injections of magnesium sulfate are discontinued for the day. In grave cases 4 Gm. of chloral is administered by rectum as supplemental therapy. With the onset of labor and dilatation of the cervix the membranes are ruptured. Otherwise pregnancy is not interrupted. The author warns against ouabain injections and preparations of the posterior part of the hypophysis in the course of labor in preeclamptic or eclamptic women. The former seem to have a harmful synergy with magnesium sulfate. Hypophysial preparations cause vascular spasm through which the convulsions are stimulated. Once the convulsions are under control the patient is given a daily intramuscular injection of 30 cc. of a 20 per cent magnesium sulfate solution and a daily intramuscular injection of 40 or 60 cc. of hypertonic dextrose solution. The treatment is discontinued when blood pressure, diuresis and urine are normal in puerperal women, and near normal in pregnant women. In the latter the treatment is reinstituted or intensified when labor approaches. At the beginning of the treatment the patients are put on the thirst and hunger diet for two or three days. The changes of diet from 0.5 liter or 1 liter of milk a day to a dry diet without salt, to a diet with carbohydrates and later to a normal diet, depend on the course of the disease, the arterial blood pressure, diuresis and the urine. Vitamins in large doses are administered in the course of the dry diet and of the carbohydrate diet. The author treated 103 patients from 1937 to 1941. In 75 the convulsions were controlled by the aforementioned therapy alone. In 28 the convulsions diminished in frequency and intensity and the therapy was successfully supplemented or replaced by sodium bromide or chloral.

Boletín de la Sociedad Cubana de Pediatría, Havana

14:49-112 (Feb.) 1942. **Partial Index**

*Hemorrhagic Purpura from Quinine Poisoning. R. Pino Varas.—p. 49.

Hemorrhagic Purpura from Quinine Poisoning.—Pino Varas reports the case of a child 4 years of age who suffered from malaria and was given a total of 16.5 Gm. of quinine in the course of treatment. There was no family history of hemorrhagic diathesis. The patient exhibited signs and symptoms of hemorrhagic purpura. The blood changes were of a toxic rather than a septic type. Purpura was controlled within one month by a therapy which consisted of liver extract, vitamin K and a diet abundant in milk and fruit juices.

Lisboa Médica, Lisbon, Portugal

18:691-756 (Dec.) 1941. **Partial Index**

*Cardiovascular Changes in Typhoid: Electrocardiographic Study. P. Madeira Pinto.—p. 703.

Cardiovascular Changes in Typhoid.—Madeira Pinto made electrocardiographic studies in 20 cases of typhoid. Alterations of the auriculoventricular conduction of various types and of different intensity were observed in 6. They varied from simple increase of the conduction time to changes which indicated a complete block. Deformation and lowering of the S-T segment of the electrocardiogram with inversion or diphasism of the T wave and variations of the voltage of the T wave were observed in 12 cases. Extrasystolic arrhythmia was observed in 2. The electrocardiograms became normal in the first few days after disappearance of fever. However, the changes reappeared in 10 cases within twelve days when post-typhoid manifestations of cardiovascular character appeared. The electrocardiographic changes of convalescent patients lasted from two weeks to four months. The electrocardiographic alterations are, in the author's opinion, due to toxic irritation of the sympathetic nerves, to the metabolic disorders of the myocardium and to anatomic lesions of the myocardium. There is no relationship between the electrocardiographic alterations and the course of typhoid. Electrocardiograms are of no prognostic significance in typhoid.

Revista Argentina de Reumatología, Buenos Aires

6:251-268 (Feb.) 1942

Multiple Etiology of Acute Articular Rheumatism. G. Costa Bertani.—p. 251.

*Mitral Stenosis in Children: Frequency and Diagnosis. B. Delgado Correa and Otilia Maccio.—p. 259.

Mitral Stenosis in Children.—The increasing frequency of cardiac localization of rheumatic disease in children induced Delgado Correa and Maccio to give particular attention to the early symptoms. Careful examination with the aid of electrocardiography, roentgenoscopy and at times with phonocardiography and phlebography, and the prolonged observation of the heart even in apparently pure articular forms led to the detection of a large number with mitral stenosis alone or associated with mitral or aortic insufficiency. Among 775 children with rheumatic disease 605, or 78 per cent, were found to have cardiac localization. Of these 317 had mitral insufficiency, 81 had mitral insufficiency and stenosis, 40 had pure mitral stenosis and others had aortic insufficiency and/or aortic stenosis alone or in combination with mitral, tricuspid and/or other cardiac lesions. The authors pay particular attention to the pure form of mitral stenosis, reviewing the 40 cases and an additional 34 cases in which there were no evident rheumatic antecedents. The 74 children varied in age between 4 and 15 years. Contrary to other investigators, who regard its occurrence as rare before the age of 14 or 15, the authors found that it is frequent even below the age of 10 years, 31 of 74 being of that age group. It was most frequent at the age of 11. Rheumatism is of greatest etiologic significance. The diagnosis of mitral stenosis is generally easy in children. Percussion often reveals an enlarged cardiac area. A thrill should be carefully searched for. Auscultation gives decisive information. The first sound may be accentuated, muffled or split. Occasionally auscultation discloses a slight systolic apical murmur. The mitral murmur is most plainly detected at the level of the second left intercostal space. Diastolic duplication and presystolic murmur are heard frequently in cases with rapid evolution. At the beginning of the diastole, mitral stenosis exhibits in place of the isolated sound, which is the second physiologic tone of the heart, two sounds, approximating the "ta-ta" of Duroziez's murmur. Together with the first sound it produces a special murmur designated by Bouillaud "bruit de rappel." The detection of this murmur is of great importance for the diagnosis. Roentgenologic studies reveal prominence of the median arch, enlarged cardiac area and prominence of the left or of the right auricle. The electrocardiographic records disclose modifications of the P and T waves, alterations of the rhythm, preponderance of the right or left ventricles and the like.

Revista Médica de Chile, Santiago

70:101-162 (Feb.) 1942. **Partial Index**

Early Diagnosis and Treatment of Rheumatic Disease. E. Cienfuegos.—p. 103.

Some Aspects of Rheumatic Disease During Childhood. J. Symon O. and G. Duffau O.—p. 107.

Early Diagnosis, Treatment and Prevention of Rheumatic Cardiopathies: Medicosocial Problem of Rheumatism in Children. A. Ariztia and O. Illanes.—p. 117.

Treatment of Medical and Surgical Disorders of Spleen. R. Vargas Molinare.—p. 130.

*Timely Diagnosis of Gastric Cancer. H. Alessandri R., F. de Amesti, J. Lerner M. and M. Ossandon.—p. 135.

Timely Diagnosis of Gastric Cancer.—Alessandri R. and his associates stress the fact that early diagnosis of gastric cancer is not always a timely diagnosis. By timely diagnosis is meant that the cancer is still resectable and that there is no invasion of regional or distant lymph nodes. The degree of malignancy differs greatly in gastric cancers; in view of the extreme malignancy of some, early diagnosis is not necessarily a timely one. In cases of relatively slight malignancy the diagnosis may still be timely even though it is no longer an early diagnosis. Borrmann's classification is most suitable for practical purposes. Cancers of groups 3 and 4 of this classification are extremely malignant; their prognosis is unfavorable even if diagnosed early. Unfortunately, 80 per cent of all gastric carcinomas belong to this group. In the remaining 20 per cent, which belong to groups 1 and 2, the likelihood of timely diagnosis is considerable, because the neoplasms here are of a slow evolution and display little tendency to metastatization. The authors stress the importance of close cooperation between the radiologist and the gastroscopist in the timely diagnosis of gastric cancer.

Archiv für klinische Chirurgie, Berlin

201:1-108 (Feb. 26) 1941. **Partial Index**

*Cause of Death in Venous Air Embolism; Experimental Study of Circulation and Respiration. H. Bierhaus and H. E. Hintze.—p. 1.

Problems in Vasography, with Special Reference to Arteriography. K. Haszler.—p. 27.

Complete Obstruction of Anastomosis Within First Few Days Following Gastric Resection: Anastomosis Phlegmon. M. Mátyás.—p. 41.

*Effect of Intravenous Injection of Prostigmine, Sodium Chloride and Dextrose Solutions on Intestinal Motility: Experimental Study. E. Hamaguchi.—p. 50.

Tumors of Region of Sella Turcica. H. Kosie.—p. 89.

Cause of Death in Venous Air Embolism.—Bierhaus and Hintze produced venous air embolism in rabbits and studied the circulation and the respiration before, during and after the experiment. Air embolism produced a mechanical obstruction in the pulmonary circulation by blocking the arteries and capillaries of the lung with blood which contained air. Increased pressure in the pulmonary arteries elicits by reflex action a constriction of the right coronary vessels. Since, however, the right side of the heart requires more blood as the result of increased cardiac activity and this requirement is inadequately met, a heart death is easily explained. This death is not entirely due to reflex action, a number of other factors being involved. Unilateral or bilateral section of the vagus and administration of atropine do not alter the course of events in the systemic circulation following air embolism. The authors conclude that a vagus reflex cannot be the cause of death in air embolism. They believe that death is caused chiefly by mechanical factors involving the pulmonary circulation, although nervous components may constitute a factor.

Influence of Prostigmine and of Solutions of Sodium Chloride and Dextrose on Intestinal Motility.—Hamaguchi describes animal experiments on the influence of prostigmine, of solutions of sodium chloride and of dextrose on the peristalsis of the small intestine. His studies were made on urethanized rabbits and revealed that hypertonic solution of sodium chloride produces a brief but noticeable increase in the tonus and the pendulum movements. Isotonic solution of sodium chloride exerts no influence on the motility. Hypertonic solution of dextrose reduces the tonus and causes disappearance of the motility. Isotonic solution of dextrose reduces the activity of the intestine, but its effect is much less intense than that of the hypertonic solution. Not the simple existence of but the rapid increase in hyperchloremia or hyperglycemia is responsible for the effects of these two substances. Their effects are almost unchanged after exclusion of the vagi and the splanchnics. Prostigmine induces an intense and lasting stimulating effect on the tonus and the pendulum movements. Hypertonic solution of sodium chloride exerts a favorable effect on peritonitic intestinal paralysis by stimulating motility. In the presence of venous stasis, hypertonic solution of sodium chloride temporarily suppresses the tonus of the intestine but the amplitude of the intestinal motility is increased.

Monatsschrift für Kinderheilkunde, Berlin

86:139-272 (April 18) 1941. **Partial Index**

*Open Pulmonary Tuberculosis in Children Under 10 Years. Maria Birkenfeld.—p. 139.
*Pathogenesis and Therapy of Alimentary Intoxication of Infants. J. Dieckhoff.—p. 223.
Course of Second Attack of Diphtheria and Its Bacterial Allergy in Animal Experiments. K. Fejes and Z. Teveli.—p. 238.
*New Method for Treatment of Allergic Diseases. K. Stolte.—p. 244.
Roentgenologic Diagnosis of Congenital Heart Disease on Basis of Six Cases Verified by Necropsy. K. Gefferth.—p. 250.

Open Pulmonary Tuberculosis in Children Under 10 Years.—Birkenfeld presents observations on 60 children with open tuberculosis. She defines as "open" cases in which the customary staining methods disclose tubercle bacilli in the sputum. Young children have no special types of open pulmonary tuberculosis, but types closely associated with the primary infection are especially frequent. The hematogenous types of open pulmonary tuberculosis, particularly lesions of the upper part of the lung with apical foci, deserve particular attention. The mode of infection was familial in 32 cases, extrafamilial in 6 and unknown in the others. In tuberculous lesions of the upper lobe with apical foci the infection was nearly always familial; among 17 cases with open primary infiltrations there were 10 in which the source of infection was unknown. The clinical manifestation, as well as the duration of the development, varied greatly in children with open tuberculosis. Some relationship could be discovered between the quantity of the bacilli and the type of the lesion. The presence of a large number of bacilli usually indicates a cavity. In lymph node perforations, atelectasis and foci with caseous softening, bacilli are often eliminated in small numbers and only for a short time. The open tuberculous lesion generally does not inhibit the physical development of the child. Psychic effects are likewise generally absent. While intercurrent disease plays an unimportant part in the development of open tuberculosis in young children, tuberculous complications are comparatively frequent. Exudative pleurisy, cutaneous, abdominal, osseous, laryngeal and renal tuberculosis, spontaneous pneumothorax and empyema are some of the complications. The treatment presents no unusual problems. General treatment is of primary importance. The various forms of collapse therapy are employed when the general condition and the pulmonary lesions make an intervention seem promising. Caution is advised with regard to extensive methods of collapse. The prospects of cure are not favorable in the young child with open tuberculosis. A definite evaluation is possible only after ten years of observation and after puberty has been completed without exacerbation of the tuberculous process. The prognosis is not entirely unfavorable.

Pathogenesis and Therapy of Alimentary Intoxication of Infants.—Biogenic amines, particularly histamine and choline, may play an important part in the pathogenesis of alimentary intoxication in infants. There is a similarity in the manifestations of alimentary intoxication and experimental histamine shock. Dieckhoff studied the histamine and choline contents of the blood of infants with dyspepsia and alimentary intoxication. He found that the blood of infants without intestinal disorders contains from 20 to 40 micrograms of histamine per liter. During dyspepsia this amount is not greatly increased, but in the course of alimentary intoxications it amounts to from three to four times the normal quantity. The choline content of the blood of healthy infants fluctuates between 0.22 and 0.36 mg. per hundred cubic centimeters. In dyspepsia there is no essential increase, but during alimentary intoxication it reaches from four to five times the normal quantity. A substance which contains histamine and other ferment-like substances and which had been used successfully in the treatment of alimentary intoxication was tested for its destructive action on histamine by in vitro tests and it was found that it inactivates the increased histamine content of the blood of intoxicated infants. The circulating volume of blood is reduced during alimentary intoxication; this reduction is caused chiefly by the loss of plasma, which in turn is brought on by the increased permeability of the vascular wall. It is important to increase the circulating quantity of blood. This can be done by mobilizing the blood in the depots by means of beta-(p-oxyphenyl) isopropyl-methylamine, which is isomeric with ephedrine and known also under the term veritol.

Treatment of Allergic Diseases.—In order to avoid an inadequate diet in a boy who proved to be allergic to many essential foods, Stolte decided to neutralize the allergens, which presumably were proteins, by precipitating them with tannin. It was assumed that they could be absorbed after they had been decomposed so that they could no longer act as allergens. Earlier tests had proved that the boy was extremely allergic to eggs, milk, cheese, beans and peas. It was decided to make a cautious attempt with eggs. On the first day the boy was given a teaspoon of an egg that had been beaten into red wine; no reaction followed. On the following day he was given half of an egg and on the third day a whole egg, each time in wine; again there were no reactions. For the precipitation of the allergens in other foods, a powdered tannin preparation was sprinkled on like salt. The child was now able to eat beans, peas and other foods against which he had been allergic. When the tannin was omitted the reactions recurred, but they subsided again when the red wine and tannin therapy was resumed. The treatment was tried in many other cases with frequently equally favorable results. A report by Hansen states that while some white wines may give rise to urticaria, red wine never does, probably because the tannic acid in it precipitates highly molecular substances.

88:1-144 (May 23) 1941. **Partial Index**

*Idiopathic Progressive Brown Pulmonary Induration During Childhood with Hereditary Hemoptysis, Intermittent Secondary Anemia, Eosinophilia and Embolic Focal Nephritis. E. Glanzmann and B. Walthard.—p. 1.
Takata Reaction (Modification Oefelein) in Comparison with Erythrocyte Sedimentation Speed as Indicator of Activity of Pulmonary Tuberculosis. L. Weingärtner.—p. 46.
*Pectin in Treatment of Early Stage of Poliomyelitis. E. Brunthaler.—p. 53.
Problem of Anaphylactic Genesis of Certain Forms of Purpura. Minsen Li.—p. 63.
Proteus Infection in Acute Intestinal and Nutritional Disturbances in Infants. Ruth-Marie Konsek.—p. 69.
*Plasma Therapy. J. W. Camerer.—p. 101.

Idiopathic Progressive Brown Pulmonary Infiltration with Hemoptysis, Anemia, Eosinophilia and Nephritis.—Glanzmann and Walthard describe a new, clinically well defined disease entity. The patient, a girl aged 11½ years, had periodic attacks of hemoptysis. At the age of 6 years the child had had scarlet fever. On the basis of a scarlet fever nephritis a probably embolic focal nephritis developed, which led to chronic hematuria. The recurrent loss of blood produced anemia with leukopenia and periodic blood eosinophilia. Although some thrombopenia could be ascertained, there were no indications of a general hemorrhagic diathesis. Roentgenograms of the lungs revealed spotted shadows, particularly in the two lower lobes. The case represents a peculiar, heredofamilial, pulmonary defect in which, probably as the result of inherited

weakness and defective formation of elastic fibers, circulatory disturbances develop in the pulmonary capillaries. The capillaries are given insufficient support by the elastic fibers; they swell into the alveolar lumen, and during the phase of expiration they are inadequately pressed out by the elastic fibers, so that, in the absence of cardiac defects, stasis and hemorrhages take place into the pulmonary alveoli. The alveoli become filled with cells. A progressive brown pulmonary induration develops with extraordinary hemosiderosis of the lungs and complete iron incrustation of the collagenic and particularly of the elastic fibers. Changes in the framework may cause circulatory disturbances, because the veins which course in it are kept gaping, as is the capillary system. The prognosis of the disorder is unfavorable. Death ensues after two or three years.

Pectin in Early Stage of Poliomyelitis.—Brunthaler calls attention to the fact that a considerable number of patients with poliomyelitis have diarrhea in the early stage. Having used the apple diet in the treatment of enteric diarrheas, he resorted to this treatment in cases of diarrhea in which poliomyelitis was suspected. The impression was gained that not only the intestinal disturbance but also the suspected basic disease was favorably influenced. In 13 children of ages between 5 weeks and 5 years with symptoms suggestive of poliomyelitis he administered at once 20 cc. of a 3 per cent of pure pectin solution into the gluteal region. The cerebrospinal fluid could not be examined in all cases, because permission was not granted. In some of the cases in which the fluid was examined negative results were obtained; in 4 cases results were positive. Observations on a large clinical material will be necessary to decide the effect of pectin in poliomyelitis.

Plasma Therapy in Infants.—Camerer employed plasma transfusions to combat dehydration, particularly in cases of manifest intoxication. Improvement in the treatment was imperative not only because the number of intoxications in infants had more than doubled in two years but also because the mortality was extremely high (66 per cent). He administered 50 cc. of plasma per kilogram of body weight, as suggested by Bessau, but later reduced the amount to 25 and even to 20 cc. per kilogram of body weight. Administration of plasma produced rapid improvement in the general state of the patient, disappearance of toxic symptoms, improvement of the turgor, increase in weight and improvement in appetite. The mortality rate of intoxications without plasma therapy in 58 cases and with plasma therapy in 46 is compared. The total mortality was reduced to nearly one half under the influence of plasma therapy, and when the fatalities of the first twenty-four hour period are deducted the rate is only about a third of what it had been before plasma therapy was instituted. Plasma therapy was used also in 61 cases with severe, frequently pretoxic dyspepsia and in 6 without dyspepsia in which vomiting had caused severe dehydration. Plasma therapy presents a distinct advance in the treatment of acute dehydration.

Zeitschrift. f. d. ges. experimentelle Medizin, Berlin

108:427-530 (Dec. 28) 1940. **Partial Index**

*Action of Desoxycorticosterone on Salt and Water Economy. F. Heni. —p. 427.
*Influence of Chloroform on Serum Colloids as Basis of Serum Reaction. F. Knüchel.—p. 440.
Action of Vagal Substance Carbaminoylcholine on Vegetative Nervous System, Particularly of Patient with Tuberculosis. E. Wegemer and E. Rödiger.—p. 461.
Dependence of Circulatory Action of Synephrin on Initial Tonus of Vegetative Nervous System. E. Rödiger and E. Wegemer.—p. 472.
Chromatophore Hormone Content of Pituitary Preparations. G. Kabelitz.—p. 484.
Mechanism of Action of Some Hemostatic Substances. H. Dyckerhoff and R. Marx.—p. 490.
Local Hemostasis in Intestinal Hemorrhages of Typhoid Patients by Means of Vegetable Substances of the Tragacanth Type. J. Kretz. —p. 495.
Metabolism of Amino Acids, J. Hořejši and L. Hloucal.—p. 509.
*Action of Short Waves on Flow of Bile. R. Leskovar.—p. 523.

Action of Desoxycorticosterone on Salt and Water Economy.—Adrenalectomized animals and patients with Addison's disease exhibit disturbances in the water and salt metabolism, as well as disorders in the carbohydrate, fat and protein metabolism. Some investigators place the stress on the salt and water economy, others emphasize the carbohydrate metabolism and still others assume that the cortical hormone has a much more general and fundamental function in the cellular metabolism. Heni reports a case of Addison's disease in which 10 mg. of desoxycorticosterone acetate was administered together with 10 Gm. of sodium chloride and 5 Gm. of sodium citrate. There has been a gain of 9 Kg. in fourteen days. Records of water intake and elimination disclosed that this increase in weight was entirely due to water retention, which was manifested as edema. After the desoxycorticosterone was discontinued, the retained water and sodium chloride were eliminated and the weight decreased to normal values. A repetition of the desoxycorticosterone medication again resulted in water retention. Similar observations were made by American investigators. Heni administered desoxycorticosterone to 13 persons without adrenal defects. All of them exhibited a noticeable decrease in the elimination of urine and of sodium chloride. Reduction of the hematocrit value, the hemoglobin, the erythrocytes and the total protein content indicated a considerable dilution of the blood. The water retention which caused a gradual increase in weight could be intensified by the simultaneous administration of sodium chloride. The question as to where in the salt water economy the desoxycorticosterone has its point of attack could not be solved in the described experiments. The chief indication for the use of desoxycorticosterone is true adrenal insufficiency. To avoid harmful effects it is best to begin with small doses. In view of the effect on the sodium chloride and water economy, desoxycorticosterone can be given also in hypochloremic uremia, in severe postdiarrheal dehydration and in serious nutritional disturbances and alimentary intoxications. The favorable effect in severe burns is probably a result of modification of the water economy. In toxic circulatory weakness of diphtheria and other infectious diseases desoxycorticosterone should be given in large doses together with considerable amounts of sodium chloride.

Influence of Chloroform on Serum Colloids as Basis of a Serum Reaction.—Knüchel points out that in extraction of blood serum or plasma with fat soluble substances such as chloroform, ether and petroleum ether a turbidity appears. Serum of healthy subjects or of those without infectious disease always showed a high degree of turbidity, whereas serum from patients with acute or chronic infections had a comparatively low degree of turbidity. The author investigated the physical or the physicochemical conditions that cause this turbidity or are responsible for its absence. The studies included the measurement of the dynamic surface tension and ultramicroscopic observation of the turbid fluids. It was found that the body which causes the turbidity is a protein cholesterol compound of the globulin fraction. Clinical observations and animal experiments suggest that the degree of turbidity reflects to a certain degree the state of immunity. The turbidity test promises to furnish information on the existence and the course of infectious diseases or with regard to the state of immunity. It could replace the more complicated determinations of the cholesterol content.

Action of Short Waves on Flow of Bile.—Leskovar shows that with the application of short waves to the gallbladder two effects can be expected: (1) action on the hepatic parenchyma; (2) action on the smooth musculature of the extrahepatic biliary system. The author is concerned chiefly with the effect on the hepatic parenchyma. Experiments on 6 rabbits and 5 dogs demonstrated that a mild choleresis is induced when short waves (6 meters) are applied for from fifteen to thirty minutes to the upper part of the abdomen. The choleretic action of the short waves is not as great as that of a mineral water with a considerable magnesium content. Short waves do not influence the biliary secretion elicited by the food stimulus. Determination of the dry residue of the bile indicated that short wave treatment does not produce contractions of the gallbladder that lead to the expulsion of bladder bile. Examination of the liver bile in 2 dogs disclosed that short wave treatment increased its water content in 1 case and decreased it in the other.

Book Notices

Unconsciousness. By James Grier Miller. Cloth. Price, $3. Pp. 329. New York: John Wiley & Sons, Inc.; London: Chapman & Hall, Limited, 1942.

This book represents a serious attempt to clarify the meaning of the term unconscious. The author states in the preface "The enigma of unconsciousness has been approached from many angles, from the neurological at the one extreme to the philosophical at the other. It has been the subject of careful experimentation on the one hand and of soaring theorizing on the other. The problem has embraced such different phenomena as fainting, hypnosis, inattention, creativity, repression and instinctual behavior. Some who have interested themselves in these questions have seen that all these sorts of unconsciousness cannot be identical, and they have often insisted that they do not even have similar characteristics. Therefore various terms have been invented, compounds of the word conscious, in order to distinguish and explain these different phenomena. Such words are subconscious, preconscious, foreconscious, superconscious, coconscious, and so forth. The results of this neologizing, however, has not been increased clarity but greater confusion. Moreover, many dissimilar sorts of behavior are still called unconscious, without any effort's being made to define the various senses of this wide term." The author attempts to distinguish the various meanings of the word unconscious and to differentiate and demonstrate variations in human behavior which have been classified as unconscious. To do this the author presents sixteen different meanings or definitions that may be classified as pertaining to unconsciousness: 1. Inanimate or subhuman, incapable of discriminating or behaving. 2. Absent minded, day dreaming, anesthetized—unresponsive to stimulation. 3. Not mental. 4. Undiscriminating (applied to the individual or to his actions). 5. Conditioned, acting sheerly on the basis of conditioning (applied to an individual); conditioned, merely conditioned responses (applied to his actions, emotions). 6. Unsensing (applied to an individual); unsensed (applied to his actions, emotions, needs, drives). 7. Unnoticing or unattending (applied to an individual); unnoticed or unattended (applied to his actions, ideas, emotions, needs, drives). 8. Insightless, lacking insight in the sense used by the gestalt school of psychologists (applied to an individual); not involving insight (applied to his actions, ideas). 9. Unremembering (applied to an individual); unremembered (applied to his actions, emotions, drives, needs). 10. Acting instinctively, behaving on an unlearned basis (applied to an individual); unlearned or inherited (applied to his actions, ideas, emotions, needs, drives). 11. Unrecognizing (applied to an individual); unrecognized (applied to his emotions, needs, drives). 12. Acting involuntarily (applied to an individual); involuntary (applied to his actions, ideas, emotions). 13. Unable to communicate (applied to an individual); incommunicable (applied to his actions, ideas, emotions, needs, drives). 14. Ignoring (applied to an individual); ignored (applied to his actions, ideas, needs, emotions). 15. Unconscious has come to have a specific psychoanalytic meaning. Originally unconscious processes were to Freud those unavailable to consciousness, which he likened to an "organ of perception." Concerning unconscious processes in this basic sense Freud made several propositions, and these are all represented by the particular freudian meaning of unconscious, which in German he abbreviated UBW and which in English is abbreviated UCS. These propositions concerning unconscious processes are (*a*) that they are dynamically repressed away from consciousness, the "organ of perception," (*b*) that they can be made available to consciousness only by special technics such as hypnosis and psychoanalysis and (*c*) that they are not under voluntary control. 16. Unaware of discrimination (applied to an individual); unavailable to awareness (applied to his actions, ideas, emotions, needs, drives).

Although the author approaches the subject from the standpoint of the experimental and laboratory psychologist, he has demonstrated his definitions with clinical material. The book is well written and the bibliography is exhaustive, but it would seem that the author writes about psychoanalytic concepts, particularly the unconscious, without much real understanding of the subject. He quotes Freud's basic writings freely but makes little or no reference to the many excellent observations made by other students of psychoanalysis since Freud's original contributions. However, this does not seriously detract from the value of the book with reference to its main theme.

Functional Neuroanatomy. By Wendell J. S. Krieg, Ph.D., Assistant Professor of Anatomy, College of Medicine, New York University, New York. Cloth. Price, $6.50. Pp. 353, with 274 illustrations plus section atlas by the author. Philadelphia: Blakiston Company, 1942.

Not many books are throughout so expressive of a personality that one feels certain that the author wrote because he enjoyed doing it—because like a true artist something within him cried out for expression. This is such a book. Not only is it well written and extremely well illustrated but it brings to the teaching of neuroanatomy a new and an interesting approach. The teaching of neuroanatomy needs a new approach. Probably no other subject is generally more poorly taught and more thoroughly disliked by the students than this. Hardly more than one out of fifty of them acquires sufficient from his course in neuroanatomy to make it worth his while. Here is a method, a book and in large measure the material whereby neuroanatomy can become one of the most intriguing of medical subjects. Every teacher who will take the time to become thoroughly familiar with Krieg's book and his method can, if he has a drop of the real teacher's blood in his veins, revise his course for the better.

With the exception of Rasmussen's valuable but much briefer and more diagrammatic book on pathways in the central nervous system, the present book is unique in neuroanatomy. Krieg has presented the nervous system not as uninteresting, cold, functionless slides of neural tissue but as an active dynamic mechanism. He is concerned here with how it is constructed, how the various parts are integrated, with how they operate and with what they do. In his presentation he has grouped those structures which form one system together and has discussed them as parts of a mechanism. Thus one finds the auditory system (the ear, cochlear nerve, cochlear nuclei, trapezoid body, lateral lemniscus and medial geniculate body) presented together. The same is true of the visual system, the somesthetic system, the pyramidal and the extrapyramidal motor systems, and others.

Not the least important part of this textbook are the illustrations, all but twenty-nine of which have been drawn by the author himself for this book. Many of them are three dimensional, so that the course of the neural pathway or the location of the nucleus under consideration is clearly demonstrated. All are well conceived and with but few exceptions (notably figures 30, 150 and 151) are unusually well drawn.

Like all other books, this one has its faults. However, they are neither numerous nor important. The majority of them seem to arise because the author is presumably neither a physiologist nor a clinical neurologist. Thus, on page 36 muscular contracture usually arises from overaction of unopposed intact muscles rather than from shrinkage of connective tissue in the paralyzed muscle. Nor is it necessary to keep paralyzed muscles "alive by direct electrical stimulation" in order to insure their recovery. On page 40, all modern neurophysiologists would disagree with the statement that the afferent end organ concerned in the knee jerk is located in the tendon. On page 71 the statements that destruction of the spinal accessory nerve results in an inability to turn the head to the opposite side and to shrug the shoulder are incorrect. Few clinicians would agree with the statement on page 178 that homonymous hemianopsia commonly arises as a result of the accumulation of fluid in the temporal horn of the lateral ventricle, which stretches the fibers of the visual radiation. Few would agree with the generalization made on page 185 to the effect that loss of the pupillary reflex on accommodation, while the pupillary reaction to light is retained, is due to severing the neuron running from the calcarine cortex to the accommodation center. The old "onion skin" distribution of sensation of the face presumed to result from the distribution of the sensory fibers in the brain stem, shown in figure 134 *b*, is not in accord with recent clinical observations. The statements on page 213 that the motor division is of necessity sacrificed in the operation of retrogasserian neurotomy and that even when this division is sacrificed this

"seriously handicaps mastication" are inaccurate. The statement on page 264 that sections above the midbrain do not give rise to any abnormality of tonus results from attempting to carry over physiologic experiments on lower forms to the subhuman primates and man and is not true for the latter, as the author clearly shows in his discussion of the extrapyramidal cortical system. Furthermore, the discussion of the spasticity resulting from cortical lesions (p. 337) is not accurate. The author attempts (pp. 336 to 340) to divide Brodmann's area 6 into a premotor and an extrapyramidal area. This is not in accord with the ideas of other workers in this field and only serves to confuse the student. The statement (p. 399) that with right sided cerebellar lesions "the right arm is held stiffly away from the body" is incorrect. There are certain annoying colloquialisms throughout the book, such as "nigra" for substantia nigra, "oblongata" for medulla oblongata, "gray" for gray matter and "dura" for dura mater. At times grammatical construction is poor. This is particularly true in the use of words of reference. For example, on page 171, fourth paragraph, what does "them" in the sixth line refer to, and does "they" in the tenth line refer to the optic tracts or to the cerebral peduncles? On page 178, second paragraph, first line, to what does "such cases" refer? On page 336, line 13, does "it" refer to area 6aα, which is the subject of the preceding sentence, or to the strip region, which is the subject of the paragraph? There are but few typographic errors. Among the most obvious are the following: on page 63, line 16, figure 30 probably should read figure 33. The same is true on page 65, line 25. In the legend to figure 218, page 356, "Intercranial" should be Intracranial, and in the legend to figure 224, page 362, "fourth ventricle" should read "temporal horn of the lateral ventricle."

Again it should be emphasized that these faults are few and do not detract materially from the value of this book. The book is designed for and will prove most useful to those who wish to learn the structure of the nervous system. For that purpose it is probably the best book that has ever been written. It will not prove as useful, however, as a reference book.

The atlas at the end of the book which correlates the appearance of sections stained by the Weigert method, which are the chief laboratory material of students of neuroanatomy, and a three dimensional diagram of the important nuclei and tracts will prove most useful and has been beautifully drawn.

There is a useful index but no bibliography, although a few source books with useful bibliographies have been cited.

The Eclipse of a Mind. By Alonzo Graves. Cloth. Price, $5. Pp. 722. New York: Medical Journal Press, 1942.

This is the story of a gifted but psychopathic newspaper reporter who suffered two mild illnesses in his late 'teens which are not adequately described but which were colored by depression. At 30 he had a borderline episode the precise nature of which was not recognized and which did not require hospitalization. Subsequently he had five hospitalizations, at 37, 40, 41, 42 and 45. These illnesses presented certain unusual clinical features. They were florid paranoid schizophrenic states marked by a wide variety of delusions and hallucinations but occurring always in a setting of manic excitement with some elation. Each time, as the hyperergastic state subsided, the delusional and hallucinatory material gradually dropped out of the picture and the patient was able to return to a more or less normal life. Large portions of the hospital record of each admission are included in the text and it is dismaying to find that in spite of long discussions of the abundant paranoid schizophrenic material the case was persistently diagnosed "manic-depressive psychosis" merely because the powerful emotional tides caused such extreme fluctuations in the intensity of the underlying delusional process. This is not calculated to increase confidence in state hospital statistics. In no place was the pertinent question raised why it is that some patients manifest their paranoia in a setting of depression and others in a setting of overactivity and elation.

On the occasion of the patient's fourth hospitalization Dr. Parkman, the compiler of the volume, set the patient to work typing out his own history, his reminiscences of his early life, his comments on his various strange experiences, on his delusions, on his hallucinatory experiences, and on the hospital notes themselves. The work was begun in 1933 while the patient was still quite ill and continued over several months as he improved. Consequently comments on his original comments frequently had to be added in footnotes as he gathered additional insight. At places the hospital notes and the patient's more or less relevant comments are printed in parallel columns.

This strange autobiography is interspersed with many essays on a wide array of topics: police reporting, prostitution, white slavery, hypnotism, political and economic problems, the boom years and the depression, and thumbnail sketches of many of his companions in the hospital. In chapter 65 there is a moving, challenging and skilful description of life in a state hospital, which he calls "a worm's eye view of a mental hospital." There are further chapters on his sex life, his dream life and the meaning of his emotional fluctuations to himself. The method by which the material was gathered is described on pages 540-544. The naïveté of the editor in accepting as conclusive the patient's own explanations of many things is exemplified in many places, as for instance on page 541, where he accepts the patient's rationalizations of his impotence as an adequate explanation.

Gradually the patient evolved a marxian reaction to his whole experience. He left for Russia in September 1934, and no data seem to be available on his condition since 1935.

At best one might say that the book contains the raw material on which a scientific study might be made. Unfortunately, to the reviewer it seems doubtful whether an analytic dissection and synthesis of the text would repay the effort without having the patient there to investigate directly and to fill in the many essential gaps which exist despite the mass of material offered. It is characteristic of the book's defects that the first adequate clinical history of the illness is found on pages 502-504, when it becomes evident that the patient suffered from masked semipsychotic states even in childhood. The relation of this fact to the development of a psychopathic personality is nowhere considered.

So much labor has gone into compiling the volume that one regrets not being able to find in it more that is of value.

Mental Hygiene for Community Nursing. By Eric Kent Clarke, M.D., F.A.P.A., Professor of Psychiatry and Pediatrics, University of Minnesota Medical School, Minneapolis. Cloth. Price, $3.50. Pp. 262. Minneapolis: University of Minnesota Press, 1942.

This is an excellent book designed to aid nurses in public health and school services, or in industry, in an understanding of problems of mental health and disease. The community nurse is in a particularly favorable position to have early contact with disturbed or potentially disturbed children and adults. If she is sufficiently informed to see that these cases are referred early for proper diagnosis and treatment, much subsequent mental illness or social disability may be prevented. The problems of physical health which the nurse must deal with are often complicated or caused by emotional difficulties, early recognition of which may greatly facilitate treatment.

The author systematically discusses the mental health problems of childhood, adolescence and adult life. His approach is that of the psychiatrist experienced in modern child guidance methods and points of view. The material is well organized, and many case discussions are included. In many instances the case discussions are purposefully oversimplified in that many obvious dynamic causative or contributing factors in a given case may be overlooked or omitted. This permits a pointing up of factors the author is particularly interested to bring to the attention of nurses.

Dr. Clarke points out the particular obligation of the community nurse to understand and utilize the community resources for study and treatment of emotionally or socially disturbed children and adults. He places wise limitations on her responsibility, which is not that of the psychiatrist or of the psychiatric social worker. He points out particular fields of usefulness, especially in dealing with mothers and their children, in which the psychiatrically oriented nurse can offer wise guidance and counsel. He concludes with a chapter on the mental hygiene of the community nurse herself.

This is an excellent book which can be profitably read by all nurses as a useful review of mental health problems.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

PROTECTIVE CLOTHING AND OINTMENTS FOR WORKERS EXPOSED TO CHROMATES IN TANNERIES

To the Editor:— **A number of men working in a leather tanning factory have been getting a dermatitis of their forearms and occasionally their arms and lower abdomen. There is a moderate amount of pruritus with this eruption. The tanning solution that they come in contact with is made from potassium bichromate, glucose and sulfuric acid. The resulting solution is known as a chrome tanning solution. The hides are hung in vats filled with water, and a certain percentage of chrome tanning solution is added. After these hides are taken out, other hides are added, and more of the chrome tanning solution is added, also some sodium bicarbonate to reduce the acid content. The men affected are those who carry the pails of the chrome tanning solution and those hanging and removing the hides from the vats. Usually there is no dermatitis until they have been working at this from three to six months. Removing to other work and the use of a soothing ointment completely cures this condition. My diagnosis is a sensitivity dermatitis, but my problem is one of protection against the dermatitis. I would appreciate any information you can give me as to the protection of these men against the dermatitis.**

Philip L. Wolgin, M.D., Elizabeth, N. J.

ANSWER.—Dermatitis is of frequent occurrence among workers in tanneries. Chromate tanning solutions are among the principal causes. Concentrated solutions of the alkaline bichromates will cause chronic ulcers called "chrome holes," especially if they enter into abrasions of the skin. Such ulcers are fairly common among workers in tanneries. Exposure to chromic acid and the chromates may in time also cause allergic eczematoid dermatitis. These patients seem to have the allergic type of chrome dermatitis, as shown by the fact that they became sensitized after three to six months' exposure. The treatment outlined is the correct one, as their complete recovery proves.

Effective preventive measures used in most modern tanneries against this type of dermatitis consist in the wearing of impervious sleeves, aprons and gloves. These could formerly be obtained from rubber manufacturing concerns; but, since rubber is now difficult to obtain on account of the war priorities, the sleeves and aprons may be made from oilcloth or any of the water impervious synthetic resins, such as pliofilm, koroseal, vinylite, cellulose acetate or waterproof cellophane. Sleeves should be worn over the rubber gloves and fastened at the wrist. No information has been found on manufacturers of such protective clothing, and the workers usually must make them for themselves.

Protective ointments offer less protection than garments such as described, but if protective ointments are used they should be of the water insoluble type, such as mixtures of hydrous wool fat 70 per cent and castor oil 30 per cent. To this may be added 2 per cent of a wetting agent such as duponol to facilitate its removal after work.

There are several types of protective ointments on the market which are similar in composition to the foregoing formula. Some of these are:

West No. 55. West Disinfecting Company, 42-16 West Street, Long Island City, N. Y.

Ply 6. Milburn Company, 905 Henry Street, Detroit.

Sav-Skin. Doak Company, 2132 East Ninth Street, Cleveland.

Chrome Ointment. Wambaugh Chemical Company, Goshen, Ind.

Tecto. Duke Laboratories, Inc., Stamford, Conn.

Practi-Kreme. Prack Laboratories, Inc., 42 West Fifteenth Street, New York.

Daily change to clean work clothes and cleansing showers immediately after work are of great value in preventing dermatitis among tannery workers.

For further reference:

Schwartz, Louis, and Tulipan, Louis: A Textbook of Occupational Diseases of the Skin, Philadelphia, Lea & Febiger, 1939, pp. 163-168 and 315-323.

Schwartz, Louis; Warren, L. H., and Goldman, F. H.: Clothing for Protection Against Occupational Skin Irritants, *Pub. Health Rep.* 55:1158 (June 28) 1940.

CHRONIC CUTANEOUS LESION OF FINGERS

To the Editor:—**May I have your advice concerning the treatment of a long-standing eczema of the fingers, which has not responded to roentgen or other local treatment by a dermatologist? The patient, a man of 32, says the condition started at the age of 12, when he was accustomed to bite his nails. There is a family history of allergy, but no incriminating agent has been uncovered. The lesion is worse in winter when the patient has been accustomed to wear wool gloves, but cutaneous tests to wool antigen have been negative. So have other cutaneous tests to common foods and common environmental allergens. However, a cutaneous test with trichophytin did give a strong local reaction. Oidiomycin was negative. There is no evidence of epidermophytosis of the toes at present, although the patient has had this condition in the past. I am told that desensitization with trichophytin may produce constitutional reaction, unless great care is used, and that the treatment would probably be ineffective, particularly in a case of such long standing.**

Clifford Kuh, M.D., New Haven, Conn.

ANSWER.—From the meager description given, any attempt at a diagnosis is not justified; but from the expression "eczema of the fingers" it seems likely that a superficial dermatitis involving all or most of the fingers is present. Four of the diseases commonly involving the fingers and coming under this head are (1) contact dermatitis, (2) fungous infection, (3) neurodermatitis and (4) pompholyx.

The first is the result of sensitization to any one or several of the substances with which the hands come in contact in work or at other times. After a long persistence of the disease the sensitization is always multiple. Study of the patient's habits at work and during his leisure, especially study of acute exacerbations if such occur, may lead to discovery of the offending substances. The cutaneous tests cited in the query with wool antigen, foods and other allergens were apparently scratch or intradermal tests, which do not apply to contact dermatitis. Patch tests made on normal skin of the forearms may be of value in detecting the causal substances. Soap is one of the commonest offenders, and such dermatitis is always worse in winter when the dry air adds to the drying effect of soap. Wool gloves, even though there is no sensitization to wool, would irritate the inflamed skin. Cotton gloves should be worn under them. Avoidance of all irritants, the use of oil or one of the sulfonated oil detergents for cleansing, and soothing local applications, such as calamine powder 4 parts, zinc oxide 4 parts, starch 7 parts and sufficient rose water ointment to make 30 parts, applied thinly night and morning after cleansing gently with oil. A light bandage or thin cotton gloves may be worn over it. Soft ointments do not succeed as well with contact dermatitis as do drying applications. One per cent phenol or a somewhat larger proportion of menthol may be added.

In the diagnosis of the second possibility, infection with a fungus, the tricophytin local reaction cited is no proof that the patient is now suffering from a fungous infection. It shows only that at some time in the past he has had such an infection. Fungous disease of the fingers may sometimes be diagnosed directly from the cutaneous lesions but usually requires proof of cultures or discovery of the fungus by direct microscopic examination of the scales or roofs of vesicles. Local treatment is usually successful in clearing a fungous infection, but difficulties are encountered, especially in cases of long duration. If the dermatitis is a dry one, painting daily with 20 to 50 per cent of tincture of iodine in alcohol, or the application once a day of weak Whitfield ointment, 2 to 4 per cent salicylic acid with twice as much benzoic acid in rose water ointment, will often succeed. If the infection is resistant, 0.5 per cent thymol may be added to the ointment, or an ointment or chloroform paint of chrysarobin, 2 to 5 per cent, may be necessary. The patient must be warned of the great danger of carrying the latter to his eyes. The hands should be kept covered. The advice with regard to desensitization with tricophytin is correct. Attempts to accomplish this are attended with considerable risk of unpleasant reactions and even the possibility of increased sensitivity.

The mention of a family history of allergy and the fact that the patient in childhood was a nail biter, with the information that the disease is always worse in winter, suggest that the dermatitis of twenty years' duration may be on a nervous basis. The negative scratch or intradermal tests (if the conjecture regarding these is correct) do not favor this diagnosis but do not disprove it. The patient's neurocirculatory and mental reactions should be studied, and he should be quizzed on the habit of rubbing or picking his fingers. Involvement of the flexures at the elbow and knees, the eyelids, the nape or the external surfaces of the extremities should be looked for. If this is determined to be the correct diagnosis, rubbing, scratching or picking should be strictly interdicted and the zinc paste with phenol or menthol should be given him with instructions to use it in place of scratching when the paroxysms of itching come on. Cool wet dressings of saturated boric acid solution are of value in allaying the itching, the lotion being dabbed dry after

an application of from fifteen minutes to an hour and the zinc paste applied. In this case, as in the case of contact dermatitis, soap and water should be avoided and wool should not be worn next the skin. The cause of the trouble should be explained to the patient and his cooperation required, by the avoidance of scratch mechanical irritation. Rest should be insisted on, best by change or a vacation of some length. The discussion of this subject by Becker and Obermayer (Modern Dermatology and Syphilology, Philadelphia, Montreal and London, J. B. Lippincott Company, 1940) is an excellent one.

The fourth possibility considered is frequently recurring attacks of pompholyx, a disease on a constitutional basis which resembles ringworm infection clinically but is related to neurodermatitis in its etiology. Vesicles on the sides of the fingers are typical of this condition, deeper than the vesicles of contact dermatitis; in fact, on the palms and soles they are quite deep. They occur in groups, and itching is quite severe. For a vesicular eruption, use cool wet dressings or baths of aluminum subacetate solution, 1 part to 16 of water, kept on for an hour at a time, then apply the cuticolor lotion of Fantus and Dyniewicz (Cuticolor Preparations, *J. Am. Pharm. A.* **27**:878 [Oct.] 1938), an addition of a skin color powder to bentonite suspension. This is dabbed on and allowed to dry. The more severe the attack the longer should the wet applications be used and the shorter the interval of cuticolor lotion. A solution of potassium permanganate in water may be used as wet dressings or baths in place of the aluminum solution.

When the vesicles have dried up, the zinc paste may be applied thinly. To prevent recurrences the same general treatment as that used for neurodermatitis is indicated.

HEBERDEN'S NODES

To the Editor:—I should like to obtain the latest information on the prognosis and treatment of Heberden's nodes.

M.D., Virginia.

ANSWER.—These "little hard knobs frequently seen on the fingers" were first described by Heberden in 1802, but his description of them was so meager (only fifty-three Latin words, translated into seventy-nine English words) that many diverse clinical, pathologic and roentgenographic definitions of the condition have since arisen. Certain physicians of the last century regarded Heberden's nodes as manifestations of gout, but current opinion is that they have nothing to do with gout but are an expression of primary (idiopathic) osteoarthritis. When primary osteoarthritis affects fingers it most commonly affects terminal phalangeal joints, sometimes midphalangeal joints (later affected) and the "thumb base" also, but metacarpophalangeal joints are rarely if ever affected. Although osteoarthritic midphalangeal joints may become somewhat nodular, and although Heberden himself did not specifically confine his digitorum nodi to the terminal phalangeal joints, it is the terminal phalangeal joints which exhibit the most nodular osteoarthritic processes; hence current definitions generally restrict the term "Heberden's nodes" to the involvement of the distal phalangeal joints of fingers. No analogous changes affect the toes.

Osteoarthritis of terminal phalangeal joints may arise (1) from acute trauma (traumatic Heberden nodes) as a result, for example, of baseball injury (baseball finger) or of catching a finger in a door or window, or (2) spontaneously, without a history of any specific injury (true Hebeden nodes, the idiopathic type which Heberden described). The first or traumatic type is characterized by degenerative cartilaginous and hypertrophic bony changes indistinguishable from those which occur in the idiopathic type. But the clinical history of the traumatic type is readily distinguishable from that of true, or idiopathic, Heberden nodes: there is a definite history of acute injury followed at once by pain and swelling of periarticular soft tissues; in the course of several weeks or months hypertrophic osseous changes affect the injured joint; in a relatively short time the articular enlargement becomes painless and remains unchanged through life.

In contrast, the true, or idiopathic, Heberden nodes make their appearance insidiously, occasionally in young or middle aged persons but generally in persons aged 45 or more. The first symptoms may be numbness and tingling of the affected finger, with mild transient aching and tenderness on pressure; in this early stage the finger may be objectively and roentgenographically normal. As the disease progresses, tenderness and aching become more chronic and periarticular thickening and inflammation appear; roentgenograms may now show beginning thinning of the interosseous space, indicative of cartilaginous destruction. Slight marginal lipping introduces the osseous reaction. The bony node slowly increases in size, although the periarticular reaction may begin to subside. Roentgenograms may then reveal cartilaginous destruction and irregular destruction and hypertrophy of marginal and subchondral bone. This destruction often leads to lateral or mesial displacement of terminal phalanx. Finally, nodes lose their tenderness; the swollen and thickened periarticular soft tissues contract over the persistent bony knobs, and thereafter the Heberden node remains as a relatively painless but rather unsightly nuisance. The pathologic histologic structure of these nodes has been described in detail by Brogsitter (*Verhandl. d. deutsch. Gesellsch. f. inn. Med.* **40**:640, 1928).

An occasional complication is the appearance of synovial cysts, cystic nodules on the dorsal aspects of the fingers at, near or between the terminal and midphalangeal joints. These small gelatinous cysts, attached to tendon sheaths, occasionally become inflamed and sometimes are opened and evacuated surgically. Thereafter the walls collapse and the nodule recedes, but it may reform. Usually the cysts need not be opened, because often they will slowly recede spontaneously. Similar lesions may affect persons without Heberden's nodes; their pathologic reactions have been described (Weber, E. P., and Freudenthal, W., *Proc. Roy. Soc. Med.* **31**:345 [Feb.] 1938).

The cause of true, or idiopathic, Heberden nodes is not known but is doubtless the same as that of primary osteoarthritis, of which it is an expression. Age certainly is an important predisposing or conditioning factor, for the incidence of Heberden's nodes is notably related to age. Stecher in his recent study (*New England J. Med.* **222**:300 [Feb. 22] 1940) reported their increasing incidence in white persons and Negroes of advancing years. Their incidence among persons less than 50 is small, but after this age it increases rapidly, so that the nodes appear in about 6 to 20 per cent of elderly white men and 15 to 30 per cent of elderly white women. They are about twice as common among white women as among white men and about as common among Negro men as among white men; they are more common among Negro men than among Negro women but much less common (about a third as common) among Negro women than among white women of similar ages. Attritional changes due to "aging" of cartilage have been held responsible by some workers, but this cause seems dubious when it is recalled that premature idiopathic Heberden nodes can affect persons in their teens; this occurred, for instance, in a girl aged 15 studied by Burt (*Rheumat. Dis.* **1**:52 [Jan.] 1939). As stated, sex seems to be an influencing factor: in Monroe's series Heberden's nodes affected nine times as many women as men (Monroe: Oxford Loose-Leaf Medicine, chapter XV, 1939, p. 367), and in 93 per cent of Burt's 40 consecutive cases of Heberden's nodes the persons affected were females. Many patients who have Heberden's nodes remark on an apparent familial tendency to the condition. But these nodes occur so frequently that it is common to find that a parent of a patient was similarly affected. Inflammatory or degenerative changes affecting the nutrient vessels of cartilage have been considered by some investigators to be the cause of the degenerative changes in cartilage which initiate Heberdens nodes; thus Kovacs reported a decrease in the number of capillaries near Heberden's nodes (THE JOURNAL, Dec. 8, 1934, p. 1803). But other workers have found no consistent evidence of related vascular abnormalities. Heberden's nodes frequently occur among persons who use the hands excessively but seem to be as common, or even more common, among "dowagers" and other persons of the leisure classes who certainly do not traumatize the fingers much. It must be concluded that the basic cause of Heberden's nodes is not age or trauma, vascular deficiency or "hereditary articular inadequacy" but some other as yet unknown factor.

Cartilage has little or no capacity for repair; hence little can be done to replace what has been destroyed or to "cure" Heberden's nodes. But measures can be adopted which will lessen the patient's worry and pain. The patient should first be assured that he does not have a progressive, deforming disease like rheumatoid arthritis but does have a common condition which probably will be more painful to his pride than to the joints. Although trauma may not be a basic cause it assuredly is an aggravating factor, and the more the affected fingers are traumatized the more annoying are symptoms likely to be. Daily use of various types of physical therapy (contrast baths, paraffin packs, hot soaks and dry heat from an electric "baker") is helpful in relieving pain. Results of roentgen therapy in the main have been disappointing. Theelin recently was advocated for the relief of painful swollen Heberden nodes (Sherwood, K. K.: *Northwest Med.* **39**:452 [Dec.] 1940), but its value has not been confirmed or the rationale for its use explained.

Also unsubstantiated by other investigators is the claim of Elliott that the nodes can be reduced in size by the pressure of adhesive plaster bandages or metallic bands intermittently applied (*M. J. & Rec.* **136**:509 [Dec. 21] 1932).

PAINFUL NODULES OF LEGS

To the Editor:—**A Jewish housewife aged 46, amenorrheic for the past two years, became ill in June 1941 with pain and swelling of both legs up to the knees. This confined her to bed, and the swelling subsided spontaneously. When first seen, in October, she had had since June pain in the left calf which became worse at night and inability to walk on the left leg. Examination revealed that the left calf was tender, with a sensation of a lump in that area and that the left leg was slightly swollen. The rest of the examination gave normal results. The blood Wassermann reaction was negative; there was moderate secondary anemia, and no lesions were apparent in roentgenograms of the long bones. There was a history of colitis in 1935 and of several peculiar, small, hard nodules on the skin, one of which, after biopsy in a reputable dermatologic clinic in 1933, was diagnosed as atypical fibrosarcoma. Three such nodules were present on the left shin. The patient's brother had what was diagnosed as neurofibromatosis. Treatment with large doses of iron and injections of thiamine hydrochloride and the vitamin B complex gave no relief. Biopsy of one of the cutaneous nodules in 1941 rendered a diagnosis of benign angiofibroma. The left leg is now normal, but a similar condition has developed in the calf of the right leg, in which tender cordlike masses can be palpated. Edema is not present. There has been no substantial weight loss throughout the course. The patient is bedridden and unable to walk and complains of pain in the right leg.**

M.D., New York.

ANSWER.—It would be more helpful toward making a correct diagnosis if more information was given as to the character of the lesions themselves and their sequelae. Was only the subcutaneous tissue involved? Was the skin freely movable? Was it discolored? Were scars or atrophy found after healing?

The nodules which were present before the attacks of pain and swelling of the legs and which were diagnosed as fibrosarcoma undoubtedly have no relation to the later events. These probably were a relatively common type of benign fibrotic tumor occurring most often on the lower extremities and known under several different names, such as fibroma durum, nodular subepidermal fibroses and histiocytoma. Tumors of this type average 1 cm. in size, are firm and may be reddish, brownish or purplish. They are set in the dermis and sometimes rise a little above the skin level or are flush with it. Once they attain their maximum size there is little tendency to change for long periods. They may be excised or destroyed by the cautery or by surgical diathermy. The entire tumor must be removed or destroyed; otherwise it recurs.

The deeper painful swellings of the calf suggest two disorders. The first, a type of erythema induratum which appears in women of middle age with poor peripheral circulation, is particularly painful and disabling and more destructive. In the treatment of this condition one seeks to improve the circulation by appropriate measures depending on the factor impeding it. Arsenic, as in the Asiatic pill or in solution of potassium arsenite, is effectively used. Roentgen therapy is helpful.

The second disease which comes to mind is the Weber-Christian syndrome, called relapsing febrile nodular nonsuppurative panniculitis. In this the subcutaneous fat tissue is involved, and the lesions are irregular or rounded, bluish or erythematous nodules 0.5 to 10 cm. in diameter. They appear at irregular intervals of weeks or months and are accompanied by fever and malaise. Their common site is the thighs, but they may appear anywhere on the trunk and the extremities. They finally involute to leave atrophic, slightly depressed scars. Women are the usual subjects. The essential tissue changes are edema and necrosis of the fatty tissue with focal inflammation. The disease has been thought by various observers to be due to iodide or bromide intolerance, to infection with the tubercle bacillus or streptococci or to focal infection. Such conditions should be sought and eliminated if found and appropriate therapy employed. If none of these are found in the background it may be useful to try cautiously therapy with the sulfonamide derivatives and with roentgen rays. Otherwise rest and supportive treatment are indicated. Most of the patients recover, though there may be exacerbations for a number of years.

SULFONAMIDES AND ROENTGEN THERAPY

To the Editor:—**There was a statement in the literature two years ago to the effect that patients receiving sulfonamide derivatives should not be subjected to any irradiation. Nothing has been heard, to my knowledge, about this issue since. If, for instance, these drugs have not had sufficient effect in a case of erysipelas, how long is one supposed to wait after the last dose before starting irradiation? I consider this issue important in practice and would deeply appreciate your opinion.**

M.D., Massachusetts.

ANSWER.—Kelly and Dowell (*Radiology* **32**:675 [June] 1939) in 1938 observed a number of patients in whom cyanosis developed after the administration of large doses of sulfanilamide. They concluded that such large doses were definitely inhibitory to any beneficial effect the roentgen rays might produce, and they questioned whether anoxemia or other changes in the blood of the sulfanilamide cyanosed patient might prevent any such beneficial effect. Kelly and Dowell further found that sulfathiazole is less objectionable, and they said that the combination of roentgen rays and sulfathiazole is still on trial.

Epstein (*J. Invest. Dermat.* **2**:43 [April] 1939), experimenting on 5 volunteers and himself, claimed to have demonstrated that sulfonamide derivatives caused definite symptoms of photosensitivity after exposure to erythema doses of ultraviolet rays. Sensitization to chemotherapy as a sequel to exposure to strong sunlight and to ultraviolet rays has been discussed by several other investigators. M. B. Marks (*J. Pediat.* **16**:503 [April] 1940) reported 2 cases of cervical adenitis in which the local and general symptoms became much worse after treatment with 75 to 100 roentgens, while sulfonamide therapy was being administered, and he implied that roentgen treatment and sulfonamide derivatives should not be used together. He also stated that after this sensitization has taken place a photoallergic state may exist for a considerable period. He concluded that the use of roentgen rays concurrently or shortly after sulfonamide derivatives was contraindicated, as the combination may lead to unpleasant and serious side effects.

Remein (*Arch. Int. Med.* **68**:325 [Aug.] 1941), in a review of the significant publications of 1940-1941, did not mention roentgen therapy at all. Long (*Canad. M. A. J.* **44**:217 [March] 1941), in discussing the care of patients receiving sulfanilamide, stressed the importance of keeping such patients out of the direct rays of the sun and away from sources of ultraviolet rays, because a certain number who acquire a cutaneous rash in the course of therapy with sulfonamide derivatives do so because of photosensitization. He further stated that any patient receiving these drugs should stay out of the sun until three days after withdrawal of the drug. Flocks, Fellowes and Kerr (*Am. J. Roentgenol.* **44**:115 [July] 1940) studied the combined action of roentgen rays and sulfanilamide on Staphylococcus aureus. In vivo experiments were conducted on mice in groups of 20 with an untreated control group. The combined action of the drug and the roentgen rays allowed fewer survivors than either the drug or the roentgen rays alone, and the authors concluded that they had not demonstrated a synergistic action of sulfanilamide and roentgen rays. In a case of erysipelas cited by Marks in which sulfanilamide might have caused a reaction, sulfapyridine was substituted with excellent results.

Radiologists in general apparently have not become aware of any contraindication to the use of sulfonamide medication in connection with roentgen therapy, but it would seem important that some further studies be made.

At present the opinion of Kelly and Dowell may be accepted that the combined use of roentgen rays and the sulfonamide derivatives is to be avoided. Apparently this simultaneous use causes an unexplained reaction detrimental to many patients. Sulfanilamide and the early sulfonamide derivatives are definitely incompatible with roentgen therapy. Nothing is known about the compatibility of the later derivatives at present, but roentgen therapy is not to be employed when the drugs are used. If the drugs must be administered, they should be given alone until more observations have been completed.

EFFECT OF ADMINISTRATIVE WORK ON MEDICAL SKILLS

To the Editor:—**In the past two years many army physicians with extensive clinical training and ability, both regular and reserve officers, have been placed in administrative positions. Often, after a year or two in such positions, they are returned to active clinical or surgical work. Isn't it true that they are likely to lose clinical and surgical skill by failure to practice for periods of years or months at a time?**

M.D., Illinois.

ANSWER.—It is impossible to give a positive general answer to this question. It can perhaps be considered from two angles: first, sensory and tactile skill, e. g. diagnostic acumen and operating dexterity, and, second the ability of the administrative medical officer to keep up with current advances in medical or surgical practice. Neither of these questions can be answered precisely. It would seem, however, that the finer skills of diagnosis or treatment, either medical or surgical, would become blunted by lack of practice over a period of months and it might take a variable length of time to reestablish them, depending on their nature. With regard to the second question, although it is theoretically possible for an administrative medical officer to keep up with the current literature in his field, it is doubted whether in practice this frequently occurs. On return to medical or surgical practice in the armed forces or elsewhere, therefore, a man who had been in administrative work would probably be faced with considerable extra work along both lines before he could be considered to have recaptured his original skill and mastery of current advances. This entire question deserves more adequate evaluation and might well be reviewed by the policy making officers in the Surgeon Generals' offices.

RELATION OF EXCRETION OF ARSENIC IN URINE TO ARSENIC POISONING

To the Editor:—In conducting a series of examinations on men working in a chemical plant processing retort ash, which contains insoluble compounds of lead, arsenic and cadmium, it was discovered that these men were excreting from 0.08 to 0.19 mg. of arsenic per hundred cubic centimeters of urine. Other men in no way exposed to arsenic showed from 0.005 to 0.008 mg. per hundred cubic centimeters, this being assumed to be normal or due to traces of arsenic in the reagents used for testing. One man, who showed local irritation of the conjunctivas, the nasal mucosa and the skin and complained of malaise, was found to be excreting 0.1 mg. per hundred cubic centimeters of urine, but this amount dropped to 0.006 mg. on his leaving the department. I am unable to find any statistics on the excretion of arsenic with reference to what threshold constitutes a danger signal. Suggestions will be appreciated.

M.D., Ohio.

ANSWER.—No fixed amount of arsenic as detected in the urine may be accepted as the point of demarcation between arsenic absorption and clinical arsenic poisoning. A number of imponderable factors necessitate this statement, such as arsenic tolerance and the duration of the period in which arsenic appears in the urine. In connection with recent investigations on experimental arsenic intake in human beings, as much as 2.3 mg. of arsenic has been found in the daily output of urine without apparent arsenic poisoning. Approximately the same output continued for several days. Conversely, in known clinical arsenic poisoning as little as 1.36 mg. of arsenic represented the maximum urinary content per liter during the period of subacute poisoning. Some arsenic may be found in the urine of all persons. This represents a portion of the trivial intake with ordinary food, drink and in some instances tobacco. In Washington, D. C., men and children without known exposure to arsenic presented a urinary content of 0.06 and 0.065 mg. of arsenic per liter, respectively. Male consumers of apples sprayed with a spray containing some arsenic seldom show a urinary content of the poison per liter greater than 0.3 mg., although occasionally one has presented a level of a maximum of 0.7 mg. None of these consumers exhibited provable arsenic poisoning. The arsenic content of the urine of orchardists who handled arsenic sprays at the peak of exposure averaged only 0.22 mg. per liter. In general it appears tenable that any value of arsenic in urine to a peak near 0.7 mg. per liter may be regarded as within normal limits, although possible exception may be taken to this statement. Higher values, up to about 3 mg., may be regarded as representing an intake of arsenic unusual and undesirable except in connection with arsenical therapy. Persistent output on this order probably is of clinical significance. In the present instance the detection of 0.19 mg. of arsenic per hundred cubic centimeters of urine is likely to be associated with evidence of intoxication, although single tests are of limited value. When exposure has persisted over a long time, examination of the arsenic content of the hair may be of greater diagnostic value. With due regard for the rate of growth of hair, samples may be collected at different lengths of the hair growth, which procedure may yield values for different time periods.

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CARE OF CHILD WITH BIRTH PALSY

To the Editor:—Kindly advise me if there are books or pamphlets available on the care of the child with mild spastic (birth palsy) paralysis in the home by the parents.

F. H. Hodges, M.D., Pikeville, Ky.

ANSWER.—"Born That Way," by Dr. Earl R. Carlson (New York, John Day Company, 1941), embodies the experience of a patient who is a doctor. He states that the purpose is to "hearten and help every person suffering from a handicap, whether physical or mental." Dr. Carlson has spastic paralysis himself and is an authority in this field.

Another book for the lay person used by nonmedical workers with spastic paralysis is "New Pathways in the Treatment of Children with Spastic Palsy," by Gladys Gage Rogers and Leah C. Thomas (New York, Macmillan Company, 1935).

Another book that may prove of some value is "A Primer on the Prevention of Deformity in Childhood," by Richard B. Raney, M.D., published by the National Society for Crippled Children in the United States of America, Inc., Elyria, Ohio. The instruction given is written up in the simplest manner, so that this handbook can be used by other than medical men.

TOXIC POSSIBILITIES OF SULFUR PURIFICATION

To the Editor:—Kindly send me information concerning the toxic or poisoning symptoms which may occur to one who fires a crucible in the process of sulfur purification. How may these symptoms be avoided?

M.D., New Jersey.

ANSWER.—In the smelting and purification of sulfur there are so many special procedures possible that this reply deals only with the simple procedure of sulfur purification by settling and skimming in the molten state. Sulfur from Sicily and possibly other Mediterranean sources is admixed with gypsum, pumice and marl. On heating, this gangue, depending on its weight, either settles out or reaches the surface as a slag. Some sulfurs contain arsenic, and this impurity is not necessarily removed in the manner described. Sulfur from the Louisiana-Texas area of this country usually is much purer and as mined may consist of more than 99 per cent of the pure element. Subsequent heat treatment may not be so much for the purposes of purification as for the preparation of rolled sulfur or flowers of sulfur. In all of these simple operations the chief offending material is sulfur dioxide, although under some circumstances hydrogen sulfide may be evolved. Under some circumstances where the cost of fuel is high the sulfur itself is burned in order to procure the molten state for purification. In this manner as much as one third of the sulfur may be lost, and in this country such a step is wasteful. In the absence of exhaust systems some 6 per cent of sulfur dioxide may contaminate the atmosphere. Primarily, sulfur dioxide is a respiratory tract irritant. As little as 0.001 per cent may produce coughing, and slightly higher concentrations may produce conjunctivitis, pharyngitis, bronchitis and the like. Prevention centers about the nonproduction of sulfur dioxide, or, if this is inevitable, the collection and removal of the gas to nondangerous areas. It is possible to conduct this operation in closed systems, although this may not be necessary since exhaust facilities for open systems may prove efficacious. The tolerable limit being near 10 parts per million, efforts should be made to maintain working conditions approximating this level. Under some circumstances it may be necessary to rule out the presence of arsenic and hydrogen sulfide. If present in harmful quantities, additional measures as indicated should be introduced to eliminate these unwanted exposures.

HYPERTENSION AND VITAMIN A

To the Editor:—After seeing a report on the treatment of hypertension by high concentration of vitamin A, I decided to try it in 1 case. Can you give me any information as to the toxic effects of overdosage of vitamin A and whether or not 200,000 units could be given indefinitely? I shall appreciate any information or references.

H. F. Binswanger, M.D., Chicago.

ANSWER.—From a practical point of view the toxicity of vitamin A is negligible. There is no important reason save cost why 200,000 units might not be given orally daily for an indefinite period. Whether or not this will have therapeutic value remains to be demonstrated.

ANTISERUM FOR DRUG ADDICTION

To the Editor:—In Queries and Minor Notes in The Journal, Sept. 27, 1941, page 1141, there was published an answer concerning antiserum for drug addiction in which a paper by Leo Hirschlaff was mentioned. May I add that J. Morgenroth (Berl. klin. Wchnschr. 40: 471, 1903) was able to refute incontestably the production of an "antitoxic serum" as pretended by Hirschlaff as well as by Valenti (Arch. di farmacol. sper. 17: 248, 1914; Arch. f. exper. Path. u. Pharmakol. 75: 437, 1914). Also Pellini and Greenfield (Narcotic Drug Addiction: I. Formation of Protective Substances Against Morphine, Arch. Int. Med. 26: 279 [Sept.] 1920), as well as Hoefer and Herzfeld (Arch. f. exper. Path. u. Phamakol. 99: 380, 1923) could not obtain an increase in the resistance after the injection of serum or casein. It must be said that there are no scientific principles on which the lessons of immunology can be in any way applied to the treatment of alkaloid addicts, and every action described as having been obtained with serotherapy is the typical action of plain serum in such cases; the treatment therefore is merely the so-called protein therapy.

P. O. Wolff, M.D., Buenos Aires, Argentina.

POSSIBLE DEATH FROM "ETHER CONVULSIONS"

To the Editor:—In reference to the answer to the question on possible death from "ether convulsions" in The Journal, March 14, 1942, page 935, may I call it to your attention that the intravenous injection of a barbiturate is regarded by many anesthetists as a specific treatment for this condition? There is also considerable evidence that a mask or other breathing apparatus beyond the lips should be removed (in order to prevent building up of carbon dioxide, thought to be one potent precipitating factor of convulsions under anesthesia) and that addition of oxygen to the inhaled atmosphere, as by a nasopharyngeal catheter, may be of benefit.

Philip Dudley Woodbridge, M.D., Philadelphia, Pa.